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Allete Financial Analysis and Valuation

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ALLETE, Inc.

Financial Analysis and Valuation Report

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By

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Contents

EXECUTIVE SUMMARY

This analysis and evaluation of ALLETE, Inc. is based on historical quantitative and qualitative data. ALLETE, Inc. (NYSE: ALE) is an electric utility provider in the upper Midwest region of the U.S. Their primary business activities involve producing and delivering electricity to customers. Over the course of the last five years, ALE has maintained a consistent customer base. This aligns with the nature of their business as it is a heavily regulated industry where growth and competition are limited geographically.

ALE appears to be a healthy business that is in good standing with the government and regulatory agencies that enforce laws and regulations in the energy sector. These agencies include the United States Environmental Protection Agency (USEPA), Minnesota Pollution Control Agency (MPCA), Minnesota Public Utilities Commission (MPUC), North Dakota Public Service Commission (NDPSC), Securities and Exchange Commission (SEC), and a few other regional commissions, agencies, and regulatory bodies. Based on a SWOT analysis and Porter's Five Forces, ALE is positioned to be a strong company in the future if they can maintain dominance and an entrepreneurial spirit.

Due to the reasons discussed in this paper it appears that ALE's common stock is overvalued. The value of the common stock as of 12/31/2019 is $81.39 (Allete, Inc. (ALE) Stock Historical Prices & Data) this is overvalued based on an analysis of ALE's company. Purely quantitative, financial analysis indicates that a fair price for ALE's stock is closer to $72.48 on 12/31/2019. Due to this information and other qualitative information, it is recommended that investors SELL their current positions in ALE.

INTRODUCTION

The purpose of this report is to analyze the publicly traded company ALLETE, Inc. and come to an investment recommendation for the common stock. This paper uses a variety of quantitative and qualitative information including, but not limited to historical financial data, historical industry data, current industry data, a SWOT analysis, analysis of Porter's Five Forces, horizontal and vertical financial analysis, other financial ratios, and earnings quality analysis.

The company is evaluated against a specific benchmark company, Avista Corporation. Some assumptions are made regarding how the companies are comparable but for the most part the companies are well suited for comparison. Both companies operate primarily in the electric utility industry and have comparable total revenue per year. In 2019 ALE sold 13,654 kWh and Avista sold 11,432 kWh. This means they each produce a similar amount of energy for their overall customers. Based on these factors Avista will be a good benchmark upon which to evaluate ALE.

ALE and its subsidiaries will be referred to as ALE unless otherwise noted. As most of ALE's business is done in the electricity market, this paper will focus on the electricity segments of ALE. ALE also provides very limited water utilities (10,000 customers). The "About Us" section of ALE's website states, "ALLETE (NYSE: ALE) is well-positioned as a reliable provider of competitively-priced energy in the upper Midwest and invests in transmission infrastructure and other energy-centric businesses" (ALLETE, Inc. Annual Report for 2019). ALE currently serves 145,000 residential customers, 15 municipality customers, and a few large industrial customers, mainly in Wisconsin, Michigan, Minnesota, and Illinois.

The electric utility market is heavily regulated. Regulation started after the great depression with the Public Utilities Holding Company Act in 1935. Since then, there have been a variety of regulatory agencies and commissions that are responsible for oversight of the electricity markets. There are limits on prices that can be charged to customers, especially residential customers. There are limits on earnings, and various liquidity and profitability ratios that keep the industry on a level playing field and protect electricity users. The electric industry provides an essential service to residential, commercial, industrial, and municipal customers. The industry also helps to protect the nation's security by ensuring that power is provided safely and without interruption.

Most of the weight of the buy, sell, or hold recommendation is based on an analysis of ALE's historical and current financial positions. Consideration will also be given to qualitative factors of both the ALE and Avista. After reading and understanding the contents of this report, the conclusion reached will be well supported by analysis and fact. If any questions arise or any inconsistencies in the data are found, please feel free to contact the author of this paper Alec Tolson at his MSUM email address: alec.tolson@go.minnstate.edu. Thank you for your time and consideration.

SWOT ANALYSIS

ALLETE

Strengths

ALE has a strong supply chain for providing fuel and materials to produce electricity. The Midwest has a robust railroad system and this benefits ALE because, “Trains transport nearly 70% of coal deliveries in the United States for at least part of the way from mines to consumers” (U.S. Energy Information Administration - EIA - Electricity explained). Additionally, while regional wind conditions may vary, wind energy is spread across a wide geographical region to minimize the impacts of poor weather conditions on the wind sector. For hydro power production, water will flow for the foreseeable future, there is no supply issue.

Pursuant to Minnesota Statute 216B.1691, subd. 3(b) utility providers in MN will have to provide at least 25% of their electricity (measured by revenue) from eligible renewable sources (Minnesota Department of Commerce, Division of Energy Resources). ALE already produces 35.1% of their electricity from renewables, as of 2019. They also provide electricity from renewables as 20.6% of their revenues from electricity (ALLETE, Inc. Annual Report for 2019, 13). Based on ALE’s understanding of their market, “’ALLETE is well positioned to thrive as all facets of an increasingly clean energy future unfold,’ stated Executive Chairman Al Hodnik. ‘In addition to our team delivering 2019 on plan financial results, the Board recently raised the dividend for the 10th year in a row’” (ALLETE, Inc. Annual Report for 2019, pg. 209).

Since ALE provides an essential service to customers it is reasonable to believe that regulatory and government bodies would step in to prevent ALE’s business from failing catastrophically in the event of a natural disaster.

Currently, ALE customers need electricity for their daily lives and business. This means they can target all portions of the market. There is no need for customers to have discretionary income in their target market and ALE can target geographical locations for expansion rather than concentrate on specific customers/customer groups.

Long term contracts cannot be terminated without multiple years notice, “All contracts with Large Power Customers continue past the contract termination date unless the required advance notice of cancellation has been given. The required advance notice of cancellation varies from two to four years.” (ALLETE, Inc. Annual Report for 2019, 11). In the event of customer contract termination ALE will have at least 2 years to find another suitable customer to provide any excess power generation that would arise from the cancelation of any contract with large power customers. Given an inability to find a suitable customer two-four years will be long enough to reduce power output, or at least plan for it.

Weaknesses

Marketing of excess power, ALE states in their 2019 financial statements that they, “market any available power to Other Power Suppliers to mitigate any earning impacts” then go on to state that, “Due to the low wholesale prices for electricity, we do not expect that our power marketing efforts would fully offset the reduction in earnings resulting from the lower demand from existing customers or the loss of customers” (ALLETE, Inc. Annual Report for 2019, 27).

ALE offers minimal options for customers to choose how their electricity is produced. This means, there is not currently a business unit that provides customers with the ability to select what source of power their electricity comes from, whether it be coal, natural gas, renewable, it is all clumped together from a customer's perspective. If customers want to elect to pay for specifically renewable energy, they must dictate that in their contract.

ALE does not mention researching any new technologies in their recent financial statements. This will put them at a disadvantage to the competitive providers who have excess capital to pour into R&D. In fact, there is only mention of "research" in ALE's 2019 financial statements three total times, two of which were regarding research conducted to assess the future impacts of customers' mining operations, and once in relation to, "Supporting research of technologies to reduce carbon emissions from generating facilities and carbon sequestration efforts" (ALLETE, Inc. Annual Report for 2019, 102). Once is better than never, but it is not at all demonstrative of a strong desire be a leader in developing new technologies.

As of 2019 ALE only generates 46.1% of the power that it supplies to its customers (ALLETE, Inc. Annual Report for 2019, 13). This makes ALE dependent on a variety of other companies to provide its customers with their electricity needs.

Opportunity

The future of the energy industry has no end in sight. People, municipalities, and industries will need to have their energy provided to them for the foreseeable future. The only disruption that is on the horizon is the possibility of using renewable energy on a smaller scale for customers to provide their own electricity. This is certainly possible on a small scale, where there is low enough demand and enough space for solar panels that will fulfill electricity demand, however this technology will need to be coupled with less expensive storage systems before it becomes fully viable for residential customers. We are seeing some companies enter these markets such as Tesla (and SolarCity) who says that a solar roof customer may, "Use solar energy to power your [their] home and reduce your [their] dependence on the grid. Purchase solar at the lowest price of any national provider with Tesla's price match guarantee”, “From permitting to installation, we’ll take care of everything” (Solar Panels: Tesla). This is certainly an area that more traditional electric utility providers are looking to move into, Tesla is not, and will not be, the only company looking to capitalize on residential electricity production, they were just the first big name to tackle the challenge. As Tesla continues to provide proof of concept for these technologies, other big players will be watching and researching in preparation to compete more directly with the Tesla business model. The real challenge here will be providing this sort of electricity to industrial customers and places with high population density who do not have space for enough solar paneling to meet their demands, forcing them to transmit their energy across the grid in a more traditional sense. This leaves lots of room for companies like ALE to move into evolving markets.

Businesses and their customers will never stop evolving. This creates an opportunity as ALE could be an innovator. As the technology becomes available for customers to provide electricity for themselves through safe, renewable sources, there will be a market shift away from traditional electric utility providers. Susan Tierney and Lori Bird say it well in their article *Setting the Record Straight About Renewable Energy,* stating, “In the U.S. and in virtually every region, when electricity supplied by wind or solar energy is available, it displaces energy produced by natural gas or coal-fired generators” and go on to state that, ” In the U.S. and in virtually every region, when electricity supplied by wind or solar energy is available, it displaces energy produced by natural gas or coal-fired generators” (Tierney, S., & Bird, L.). This is good news for ALE because their subsidiary ALLETE Clean Energy specializes in renewables and boast a strong entrepreneurial spirit. ALLETE Clean Energy’s mission statement touches on some of the specific points mentioned above: developing and acquiring renewable projects, delivering clean energy solutions, and constructing efficient operations. ALLETE Clean Energy is not only interested in operating clean energy facilities, they also “engage in the development of wind energy facilities for sale to others upon completion” (Our Businesses). This is a huge advancement because it will allow ALE to be competitive in a market that has a huge upside potential as customers strive for energy independence. It is important to be part of this market because as customers become independent of their electric utility providers their independence will directly take away from potential future revenues.

Developing and acquiring renewable projects will allow ALE to remain on the forefront of the energy industry. This will require some of the entrepreneurial spirit they mention in their mission statement.

Delivering clean energy solutions will be necessary for any residential customer as they cannot have a coal fired plant in their back yard without an extensive capture system to prevent health issues. *Coal Power Impacts* says that, “When coal is burned it releases a number of airborne toxins and pollutants. They include mercury, lead, sulfur dioxide, nitrogen oxides, particulates, and various other heavy metals. Health impacts can range from asthma and breathing difficulties, to brain damage, heart problems, cancer, neurological disorders, and premature death” (Union of Concerned Scientists). This takes coal off the table for residential customers to use for their personal needs even though coal still accounts for 23% of electricity generated in the US as of 2019 (U.S. Energy Information Administration - EIA - Electricity explained).

Threats

“Personnel costs may increase due to competitive pressures or terms of collective bargaining agreements with union employees” (ALLETE, Inc. Annual Report for 2019, 22). If employees do not feel that they are being properly compensated by ALE they could find work elsewhere within the industry, this would be damaging to the company and its reputation.

Potential for reputational damage to the company due to the dangerous nature of some electricity production. If ALE were to experience a public incident, especially an incident in which there is a loss of life, this could have significant adverse impacts on the company’s reputation, which could lead regulators to shift dependence to other providers.

ALE states on page 23 of its 2019 financial statements that, “We are vulnerable to acts of terrorism or cybersecurity attacks” and “There have been cybersecurity attacks on U.S. energy infrastructure in the past and there may be such attacks in the future”. A ‘successful’ terrorist or cybersecurity attack could compromise ALE’s ability to serve its customers and may result in other material adverse impacts on the business or the businesses that ALE depends on to serve its customers.

“Minnesota Power’s eight Large Power Customers accounted for 28 percent of our 2019 consolidated operating revenue” (ALLETE, Inc. Annual Report for 2019, 24). ALE may be negatively impacted if their main customers fail or experience a downturn in business.

Avista

Strengths

Avista is a well-positioned electric utility provider across the north western US. Many of the company’s strengths are common across the electric utility industry. Avista produces energy through a variety of renewable and non-renewable means. At 12/31/2019, "Avista Utilities' electric generation resource mix (including contracts for power purchases) was approximately 51 percent hydroelectric, 45 percent thermal and 4 percent wind" (Avista Corporation 2019 Annual Report, 18). Hydroelectric facilities are spread across Washington and Idaho. There is no reason to believe that hydroelectric facilities will become unreliable for the purposes of electricity production in the foreseeable future. Natural gas, Avista's most used fuel source for energy production is plentiful, "U.S. proved reserves of natural gas increased nearly every year since 2000" (U.S. Energy Information Administration - EIA - Independent Statistics and Analysis. (n.d.). Natural gas explained). This means that the amount of known natural gas resources within the U.S. borders has steadily increased since the year 2000. Since the location of natural gas is strongly correlated with other energy sources produced by the mining industry the capture and transportation of these resources can be made easier by the existing infrastructure. Coal is also one of Avista's energy sources to produce thermal energy, and as stated earlier under ALE's strengths, there is a robust network of trains that are used for coal shipping.

As is true with ALE, Avista provides an essential service to customers. It is reasonable to believe that regulatory and government bodies that oversee the electricity industry would step in to prevent Avista's business from failing catastrophically due to unforeseen circumstances such as a natural disaster.

Avista is well positioned to sell electricity to all customers in their market. Customers need electricity for their daily lives/business. This means they can target all portions of the market. There is no need for customers to have discretionary income in their target market and Avista can target geographical locations for expansion rather than concentrate on specific customers/customer groups.

Weaknesses

Avista does not mention any type of research in their financial statements for 2019. The only mention of the word research is in relation to reports made by market research firms. This is troubling because the electric utility industry needs to be forward looking. Without any research being conducted to investigate more efficient production, transportation, or uses, Avista is putting itself in the crosshairs of competitors. In this instance competition would be in the form of customers producing their own energy. It is worth repeating that Susan Tierney and Lori Bird say in their article *Setting the Record Straight About Renewable Energy*, that they have concluded, "In the U.S. and in virtually every region, when electricity supplied by wind or solar energy is available, it displaces energy produced by natural gas or coal-fired generators". It is necessary for energy suppliers/producers to adapt to survive. Avista does not appear to be doing adaptation.

In 2019 Avista purchased 4,833 kWh of its 11,903 kWh of total resources (Avista Corporation 2019 Annual Report, 149). This means they relied on purchasing electricity from other producers for about 40.6% of their overall energy needs. This is a significant weakness because being reliant on other producers puts Avista in a difficult place if their suppliers are unable to meet demands or have unforeseeable outages.

Opportunity

See: 'Opportunities' section under ALLETE. The opportunities for Avista are the same as the opportunities for ALE. There is no notable difference in the business environment that would impact any points made, and there are no additional opportunities to discuss.

Threats

Threat of regulation: It is possible that regulatory structures or matters may change. For Avista, this could, “affect our ability to recover costs and earn a reasonable return” (Avista Corporation 2019 Annual Report, 14). These matters could also have an effect on accounting issues, “which could require the write-off of regulatory assets and the loss of regulatory deferral and recovery mechanisms” (Avista Corporation 2019 Annual Report, 14). Regulation is a threat to any participant in the electric utility industry.

Natural disasters such as wildfires, severe weather, avalanches, and earthquakes can cause serious disruptions to the transportation of electricity that has already been generated. If Avista is held liable for the cause of any wildfires they would be held accountable for any loss of life or property.

Reputational damage: in the event of a disaster, natural or man-made, Avista could suffer irreparable reputational harm if they were unable or unwilling to assist in reparations. If this were to happen, customers and regulators may try to put another company in charge of their business area.

Threat of collective bargaining: “work-force issues, including changes in collective bargaining unit agreements, strikes, work stoppages, the loss of key executives, availability of workers in a variety of skill areas, and our ability to recruit and retain employees” (Avista Corporation 2019 Annual Report, 14) would have a direct impact on company performance.

Facilities in Alaska are isolated from other parts of the grid and any adverse impacts to those facilities could cause customers harm, as well as the company reputational harm for being unable to provide electricity. Replacement power would be fueled by diesel which is cost prohibitive.

Terrorist or cybersecurity attacks could disrupt service or cause reputational damage, as mentioned above for ALE's Threats sections of their SWOT analysis. This would be detrimental to the company and potentially cause significant outages.

PORTER'S FIVE FORCES

Porter's Five Forces is a method of analyzing an entity's competition. The framework measures competency in five different areas of business that effect profitability.

ALLETE

Rivalry with competitors

Competition is not an issue for most of ALE's business. "Retail electric energy sales in Minnesota and Wisconsin are made to customers in assigned service territories. As a result, most retail electric customers in Minnesota do not have the ability to choose their electric supplier" (ALLETE, Inc. Annual Report for 2019, 17). "Minnesota Power serves 10 Large Power facilities over 10 MW, none of which have engaged in a competitive rate process. No other large commercial or small industrial customers in Minnesota Power's service territory have sought a provider outside Minnesota Power's service territory. Retail electric and natural gas customers in Wisconsin do not have the ability to choose their energy supplier. In both states, however, electricity may compete with other forms of energy. Customers may also choose to generate their own electricity or substitute other forms of energy for their manufacturing processes" (ALLETE, Inc. Annual Report for 2019, 17). Based on these statements, it appears that customers generating their own electricity in the future is a significant competitive threat that ALE faces. Additionally, “The FERC [Federal Energy Regulatory Commission] has continued with its efforts to promote a competitive wholesale market through open-access electric transmission and other means. As a result, our electric sales to Other Power Suppliers and our purchases to supply our retail and wholesale load are made in a competitive market” (ALLETE, Inc. Annual Report for 2019, 17).

Bargaining power of suppliers

It could prove difficult for ALE to remain competitive if suppliers increased costs too much. Since the utility industry is so heavily regulated ALE would have a difficult time quickly increasing rates to many of its customers to compensate for increased costs of materials. Montana and Wyoming are the primary sources of coal that is supplied, and there are many alternative mines in Montana and Wyoming that keep competition high which reduces the probability of increasing coal costs from any one supplier.

Bargaining power of buyers

Due to the monopolistic nature of traditionally regulated electric utility providers, there is not much room for customers or fellow distributors to demand lower prices. Retail providers do not have much say in the matter other than asking regulators to change prices, which can be a slow process. When ALE sells electricity to other power suppliers, “sales are at market-based prices into the MISO (Midcontinent Independent System Operator) market on a daily basis or through bilateral agreements of various durations” (ALLETE, Inc. Annual Report for 2019, 12).

Potential for substitute products and potential of new entrants

These two sections of Porter's Five Forces will be combined because for the electric utility industry they are too closely related to separate.

The retail energy industry is highly regulated in the US and this provides high barriers to entry for businesses looking to enter (or leave) the market. The following graphic illustrates different states philosophies on retail electricity markets:

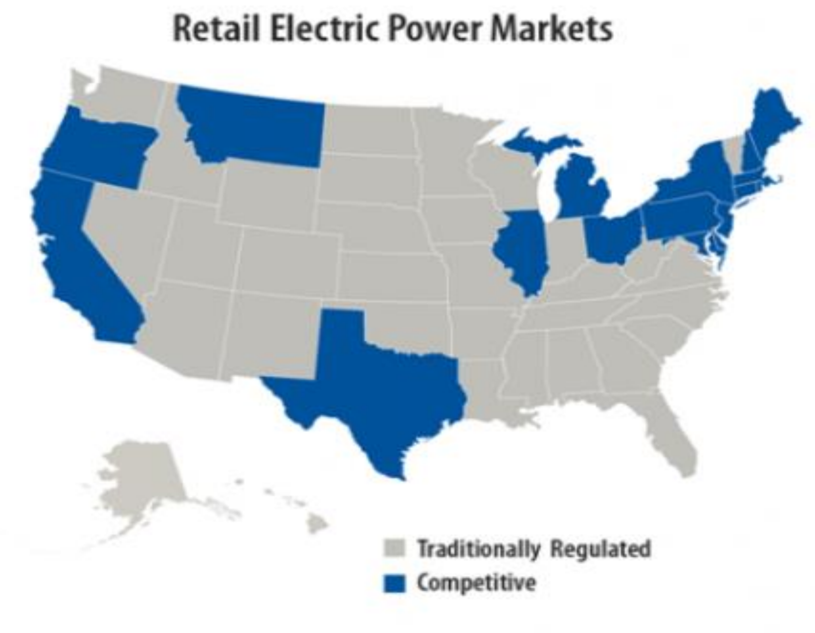

Figure 1 (Understanding Electricity Market Frameworks & Policies)

As shown in this image, most of ALE's customers fall into the category of *Traditionally regulated*. This means that the markets are vertically integrated so that the utility companies control the flow of electricity from generation all the way to the end customer.

This varies from *competitive* or *deregulated* markets (referred to as competitive markets) in which generation and transmission ownership are prohibited and the ownership interests are, "only responsible for distribution, operations, maintenance from the point of grid interconnection to the meter, and billing ratepayers" (Understanding Electricity Market Frameworks & Policies). This means in a competitive market the electricity is distributed through the public grid and until it reaches the point of connection with the grid, whether this is a municipal, commercial, industrial, or retail grid connection.

Minnesota, Wisconsin, and North Dakota are all traditionally regulated markets while Illinois is a competitive market. Having access and influence in traditionally regulated markets gives ALE competitive advantage because the barrier to enter these markets is high, ALE can focus on competing with existing competition as its unlikely they will encounter many up-and-coming energy utility providers. Reasons the barrier to entry is high include licenses restrictions and high license fees that sometimes limit the number of licenses available in a particular market, high sunk cost requirements, and existing long contract terms (Competition in Utility Markets).

ALE benefits from economies of scale which will also make it difficult for any small competitors to enter the market.

Avista

Rivalry with competitors

Avista's business has historically been recognized as a monopoly (Avista Corporation 2019 Annual Report, 62), however, "In retail markets, we compete with various rural electric cooperatives and public utility districts in and adjacent to our service territories in the provision of service to new electric customers" (Avista Corporation 2019 Annual Report, 62). There is also the possibility that customers will begin to produce their own electricity, as mentioned in the threats section of both SWOT analysis.

Bargaining power of suppliers

It could prove difficult for Avista to remain competitive if suppliers increased costs too much on natural gas or coal. Since the utility industry is so heavily regulated Avista would have a difficult time quickly increasing rates to many of its customers to compensate for increased costs of materials. This could lead to heavy losses during the period when adjustments are still being approved by regulators. Avista produces much of its electricity through hydroelectric dams, which have not had problems maintaining a supply of water, historically.

Bargaining power of buyers

As mentioned in the section: “Rivalry with competitors”, Avista’s business has historically been a monopoly. This does not prevent buyers from producing their own electricity and that could be a serious issue for Avista if costs to produce and store electricity are reduced. Regulation will prevent customers from collectively bargaining to reduce the costs of electricity to dangerous levels.

Potential for substitute products and Potential of new entrants

These two sections of Porter’s Five Forces will be combined because for the electric utility industry they are too closely related to separate.

Again, Avista’s business model and the regulatory environment dictates that electric utility providers do business in a monopolistic environment. The barriers to entry in the electric utility industry are highly preventative from allowing new players on the board. Reasons the barrier to entry is high include licenses restrictions and high license fees that sometimes limit the number of licenses available in a particular market, high sunk cost requirements, and existing long contract terms (Competition in Utility Markets). Avista also benefits from economies of scale which make it extremely difficult for a competitor, who does not have a foothold in the industry, to start doing business with the expectations of ever making a profit. This prevents any small companies from entering the industry.

FINANCIAL STATEMENT ANALYSIS

ALLETE

Financial Statements Qualitative

I. **Notes to Consolidated Financial statements**

1. Operations and significant accounting policies (Summary of significant items. For a full list and explanation see the firm's notes to financial statements)
    a. Financial statement preparation, GAAP.
    b. Evaluation of subsequent events for potential recognition and disclosure through the time of the financial statement issuance.
    c. Consolidation of all majority-owned subsidiary companies and variable interest entities of which ALE is the primary beneficiary. All material intercompany balances and transactions have been eliminated in consolidation.
    d. "Management considers whether ALLETE has the power to direct the most significant activities of the VIE and is obligated to absorb losses or receive the expected residual returns that are significant to the VIE. The accounting guidance for VIEs applies to certain ALLETE Clean Energy wind energy facilities" (ALLETE, Inc. Annual Report for 2019, 73).

e. Business segments: Regulated Operations, ALE Clean Energy and U.S. Water Services.

f. ALLETE Clean Energy focuses on renewable energy projects, 5 states, 660MW wind energy, 380MW wind energy under production

g. U.S. Water Services was sold on March 26, 2019 pursuant to a stock purchase agreement for $270 million cash. After the sale, ALE no longer has any water utility business.

h. Corporate and Other: BNI Energy, investment in Nobles 2, ALLETE Properties, other developments and expenditures, unallocated interest expense, 4,000 acres of land in Minnesota, earning on cash and investments

i. Cash, cash equivalents and restricted cash

Cash, Cash Equivalents and Restricted Cash	**December 31, 2019**	**December 31, 2018**	**December 31, 2017**
Millions			
Cash and Cash Equivalents	$69.3	$69.1	$98.9
Restricted Cash included in Prepayments and Other	2.8	1.3	2.6
Restricted Cash included in Other Non-Current Assets	20.4	8.6	8.6
Cash, Cash Equivalents and Restricted Cash on the Consolidated Statement of Cash Flows	$92.5	$79.0	$110.1

Figure 2

j. Accounts Receivable reported net of allowance for doubtful accounts.

k. Concentration of credit risk is primarily because of accounts receivable.

l. Inventories are stated at the LCNRV, Regulated Operations uses FIFO, ALLETE Clean Energy and Corporate and Other businesses use average cost, FIFO, or specific identification.

m. PPE is recorded net of accumulated depreciation. Additions, improvements, and significant replacements are capitalized. Maintenance and repair are expensed as incurred.

n. ALLETE Clean Energy acquired assets of a wind project and will own and operate an Oklahoma facility producing about 300MW, expected to be completed in late 2020.

o. Impairment was assessed and in 2019, 2018, and 2017, there were no indicators of impairment of property.

p. Derivatives: ALE uses derivatives to manage risks including interest rate risk related to variable-rate borrowings.

q. Accounting for Stock-Based Compensation: See note 13. Employee Stock and Incentive Plans.

r. Other Non-Current Assets:

Other Non-Current Assets

As of December 31	2019	2018
Millions		
Contract Assets *(a)*	$28.0	$30.7
Finance Receivable *(b)*	—	10.4
Operating Lease Right-of-use Assets *(c)*	28.6	—
ALLETE Properties	21.9	24.4
Restricted Cash	20.4	8.6
Other Postretirement Benefit Plans	37.5	0.4
Other	80.8	77.9
Total Other Non-Current Assets	$217.2	$152.4

(a) Contract Assets include payments made to customers as an incentive to execute or extend service agreements. The contract payments are being amortized over the term of the respective agreements as a reduction to revenue.
(b) Finance Receivable related to the 2016 sale of Ormond Crossings and Lake Swamp, which was collected in the second quarter of 2019.
(c) See Leases.

Figure 3

s. Other Current Liabilities:

Other Current Liabilities

As of December 31	2019	2018
Millions		
Provision for Interim Rate Refund *(a)*	—	$40.0
PSAs	$12.3	12.6
Contract Liabilities *(b)*	—	7.6
Provision for Tax Reform Refund *(c)*	0.2	10.7
Contingent Consideration *(d)*	—	3.8
Operating Lease Liabilities *(e)*	6.9	—
Other	41.0	53.8
Total Other Current Liabilities	$60.4	$128.5

(a) Provision for Interim Rate Refund was refunded to Minnesota Power's retail customers in the second quarter of 2019.
(b) Contract Liabilities consist of deposits received as a result of entering into contracts with our customers prior to completing our performance obligations.
(c) Provision for Tax Reform Refund related to the income tax benefits of the TCJA in 2018 was refunded to Minnesota Power customers in the first quarter of 2019 and is being returned to SWL&P customers through 2020.
(d) Contingent Consideration related to the earnings-based payment resulting from the U.S. Water Services acquisition was paid in the first quarter of 2019.
(e) See Leases.

Figure 4

t. Other Non-Current Liabilities:

Other Non-Current Liabilities

As of December 31	2019	2018
Millions		
Asset Retirement Obligation	$160.3	$138.6
PSAs	64.6	76.9
Operating Lease Liabilities *(a)*	21.8	—
Other	46.3	47.1
Total Other Non-Current Liabilities	$293.0	$262.6

(a) See Leases.

Figure 5

u. Leases: determined at inception whether to recognize right-of-use asset and lease liability for terms greater than 12 months. Currently do not have any finance leases.

v. Environmental Liabilities are reviewed and accrued quarterly based on current understanding and technology.

w. Revenue: contracts with customers (utility), contracts with customers (non-utility), other (non-utility).

x. Revenue Recognition: recognized in accordance with applicable laws and regulations (GAAP).

   i. Residential and commercial: performance obligations are satisfied when the utility is supplied to their meter and simultaneously consumed.

   ii. Municipal: Performance obligations are satisfied when the energy is delivered to the agreed municipal substation or meter.

   iii. Industrial: performance obligation is satisfied when the energy is delivered to the substation.

iv. Other power suppliers: performance obligation is satisfied when the energy is delivered to the point defined in the contract (generally the MISO pricing node).

v. Capital projects: progress payments are received and are recorded as contract liabilities until performance obligations are satisfied when equipment and other components are delivered.

vi. Corporate and other: performance obligations are satisfied as coal is delivered to customer, or when control transfers to the customer.

y. Non-Controlling Interest in Subsidiaries: portion of equity ownership, net income (loss), and comprehensive income that is not attributed to ALE.

z. Income Taxes: liability method, recognize a position more likely than not (more than 50% likely).

2. Property, plant and equipment

a. Straight line method over estimated useful lives.

b. Asset retirement obligations are recognized and relate primarily to the decommissioning of coal-fired and wind energy facilities.

3. Jointly-owned facilities and assets

a.

Regulated Utility Plant	Plant in Service	Accumulated Depreciation	Construction Work in Progress	% Ownership
Millions				
As of December 31, 2019				
Boswell Unit 4	$662.7	$258.9	$5.7	80
CapX2020	101.0	13.5	—	9.3 - 14.7
Total	$763.7	$272.4	$5.7	
As of December 31, 2018				
Boswell Unit 4	$650.1	$229.9	$6.4	80
CapX2020	101.0	11.0	—	9.3 - 14.7
Total	$751.1	$240.9	$6.4	

Figure 6

4. Regulatory matters

a. Minnesota Solar Energy Standard details Minnesota's regulatory environment to produce electricity in Minnesota.

b. Electricity Rates are subject to heavy regulation.

c. Return on equity rates are subject to regulation.

d. Debt to equity rates are subject to regulation.

e. Construction in progress is subject to regulation.

f. Regulatory assets and liability summary:

Regulatory Assets and Liabilities **As of December 31**	**2019**	**2018**
Millions		
Non-Current Regulatory Assets		
Defined Benefit Pension and Other Postretirement Benefit Plans *(a)*	$212.9	$218.5
Income Taxes *(b)*	123.4	105.5
Asset Retirement Obligations *(c)*	32.0	32.6
Cost Recovery Riders *(d)*	24.7	—
Boswell 1 & 2 Net Plant and Equipment *(e)*	10.7	16.3
Manufactured Gas Plant *(f)*	8.2	8.0
PPACA Income Tax Deferral	4.8	5.0
Other	3.8	3.6
Total Non-Current Regulatory Assets	$420.5	$389.5
Current Regulatory Liabilities *(g)*		
Provision for Interim Rate Refund *(h)*	—	$40.0
Provision for Tax Reform Refund *(i)*	$0.2	10.7
Transmission Formula Rates	1.7	4.4
Total Current Regulatory Liabilities	1.9	55.1
Non-Current Regulatory Liabilities		
Income Taxes *(b)*	407.2	396.4
Wholesale and Retail Contra AFUDC *(j)*	79.3	64.4
Plant Removal Obligations *(k)*	35.5	25.1
Defined Benefit Pension and Other Postretirement Benefit Plans *(a)*	17.0	—
North Dakota Investment Tax Credits *(l)*	12.3	14.7
Conservation Improvement Program *(m)*	5.4	1.5
Cost Recovery Riders *(d)*	—	6.9
Transmission Formula Rates	—	1.6
Other	3.6	1.5
Total Non-Current Regulatory Liabilities	560.3	512.1
Total Regulatory Liabilities	$562.2	$567.2

Figure 7

5. Equity investments

a. Investment in ATC approx. 8%, under the equity method.

b. Investment in Nobles 2 at 49% ownership, under the equity method.

6. Goodwill and intangible assets

a. After the sale of U.S. Water Services there is no goodwill to be recorded at year end.

b. Summary of intangibles:

	December 31, 2018	Amortization	Other *(b)*	December 31, 2019
Millions				
Intangible Assets				
Definite-Lived Intangible Assets				
Customer Relationships	$50.7	$(1.1)	$(49.6)	—
Developed Technology and Other *(a)*	7.5	(0.4)	(6.1)	$1.0
Total Definite-Lived Intangible Assets	58.2	(1.5)	(55.7)	1.0
Indefinite-Lived Intangible Assets				
Trademarks and Trade Names	16.6	n/a	(16.6)	—
Total Intangible Assets	$74.8	$(1.5)	$(72.3)	$1.0

(a) Developed Technology and Other includes land easements and trade names with finite lives.
(b) On March 26, 2019, ALLETE completed the sale of U.S. Water Services which resulted in the removal of the related intangible assets from the Consolidated Balance Sheet.

Figure 8

7. Fair value

a. Fair value hierarchy is determined on a scale of 1 (easily observable) to 3 (generally less observable) as follows

	Fair Value as of December 31, 2019			
Recurring Fair Value Measures	**Level 1**	**Level 2**	**Level 3**	**Total**
Millions				
Assets:				
Investments *(a)*				
Available-for-sale – Equity Securities	$11.1	—	—	$11.1
Available-for-sale – Corporate and Governmental Debt Securities *(b)*	—	$9.7	—	9.7
Cash Equivalents	0.9	—	—	0.9
Total Fair Value of Assets	$12.0	$9.7	—	$21.7
Liabilities:				
Deferred Compensation *(c)*	—	$21.2	—	$21.2
Total Fair Value of Liabilities	—	$21.2	—	$21.2
Total Net Fair Value of Assets (Liabilities)	$12.0	$(11.5)	—	$0.5

Figure 9

8. Short-term and long-term debts

a. Short-term debt consists of lines of credit, commercial paper, long-term due within one year

b. Long-term debt consists of unamortized debt issuance costs, first mortgage bonds, term loans, secured/unsecured notes, and other long-term debt.

c. Financial covenants: the most restrictive covenants require ALE to maintain a ratio of indebtedness to total capitalization of less than or equal to 0.65 to 1.00, currently 0.42 to 1 as of year-end.

9. Commitments, guarantees and contingencies
    a. Power Purchase and Sale Agreements (PPA, PSA) comply with consolidation requirements.
    b. Minnesota Power has agreements in place to purchase a significant portion of coal required.
    c. Transmission: continued investment in transmission assets and tech to enhance the grid and provide better efficiency
        i. Great Norther Transmission Line: 220-mile transmission line between Manitoba and Minnesota's Iron Range est. completion mid-2020.
    d. Environmental matters:
        i. Air quality control
        ii. Climate change
        iii. Water quality control
        iv. Solid and hazardous waste
10. Common stock and earnings per share
11. Income tax expense
    a. Net of deferred tax assets and liabilities computed yearly.
    b. Net operating loss and tax credit carry forwards:

NOL and Tax Credit Carryforwards

As of December 31	2019	2018
Millions		
Federal NOL Carryforwards *(a)*	$211.3	$319.0
Federal Tax Credit Carryforwards	$302.5	$256.4
State NOL Carryforwards *(a)*	$274.8	$305.8
State Tax Credit Carryforwards *(b)*	$23.4	$27.4

(a) Pre-tax amounts.
(b) Net of a $69.6 million valuation allowance as of December 31, 2019 ($66.0 million as of December 31, 2018).

Figure 10

12. Pension and other postretirement benefit plans

a. Defined benefit pension plan, of which the non-union plan was frozen in 2018 and does not allow further crediting of service or earnings to the plan and is closed to new participants. The union defined pension plan is also closed to new participants.
b. Postretirement health care and life insurance.

13. Employee stock and incentive plans
    a. Employee stock ownership plan, stock-based compensation, and share-based compensation
14. Business segments
    a. Regulated Operations
    b. ALLETE Clean Energy
    c. U.S. Water Services (sold in 2019)
15. Quarterly financial data (Unaudited)
    a. Contains quarterly data that has not been audited.

(ALLETE, Inc. Annual Report for 2019, 73-124)

External Auditor

PricewaterhouseCoopers LLP

Unqualified opinion

Internal controls appear to be operating effectively based on applicable framework

Quality of Earnings

Operating income	179,800,000
/ Annual net cash flows from operations	249,500,000
Result should be near 1	0.72

The result of 0.72 indicated that there may be some earning management is taking place, this could be due to regulatory requirements and will be treated as an acceptable result. However, the auditors have expressed an unqualified opinion on the financial statements. This means they do not believe that the financial statements are materially misstated.

Avista

Financial Statements Qualitative

I. Notes to Consolidated Financial statements

1. Summary of Significant Accounting Policies

    a. Nature of the business is a highly regulated environment.

    b. Basis of Reporting follows GAAP and intercompany balances were eliminated in consolidation.

    c. Use of Estimates are relied on in accordance with GAAP.

    d. Systems of Accounts adhere to regulatory requirements.

    e. Subject to regulation in Washington, Idaho, Montana, Oregon, and Alaska

    f. Depreciation follows standard practices.

    g. Allowance for Funds Used During Construction (AFUDC) is capitalized as part of the cost of utility plants and has been transferred to Non-current regulatory assets per regulatory requirements.

h. Income Taxes are accounted for net of DTA and DTL and takes tax approach that is "more likely than not" when reporting income taxes

i. Stock-Based Compensation includes restricted shares, market-based awards, and performance-based awards.

j. Other Expense (Income) Net

	2019	2018	2017
Interest income	$ (2,587)	$ (2,710)	$ (2,162)
Interest on regulatory deferrals	(1,460)	(990)	(1,288)
Equity-related AFUDC	(6,585)	(6,554)	(6,669)
Non-service portion of pension and other postretirement benefit expenses	8,899	5,156	7,670
Net (income) loss on investments	(14,299)	5,369	4,160
Other expense (income)	1,104	1,187	(1,104)
Total	$ (14,928)	$ 1,458	$ 607

Figure 11

k. Earnings per Common Share Attributable to Avista Corporation Shareholders: See note 20 for earning per common share calculations.

l. Cash and Cash Equivalents: investments with maturity less than 3 months.

m. Allowance for Doubtful Accounts is determined in accordance with GAAP

n. Utility Plant in Service determined in accordance with GAAP

o. Asset Retirement Obligations: the company records a fair value liability for an ARO when its incurred

p. Goodwill: evaluated for impairment regularly

The changes in the carrying amount of goodwill are as follows (dollars in thousands):

	AEL&P	Other	Accumulated Impairment Losses	Total
Balance as of January 1, 2019	$ 52,426	$ 12,979	$ (7,733)	$ 57,672
Goodwill sold during the year	—	(12,979)	7,733	(5,246)
Balance as of December 31, 2019	$ 52,426	$ —	$ —	$ 52,426

Goodwill sold during the year relates to the sale of METALfx in April 2019. See Note 25 for further discussion. Accumulated impairment losses were attributable to METALfx, which was a part of the other businesses.

Figure 12

q. Derivative Assets and Liabilities: measured at estimated fair value. "Substantially all forward contracts to purchase or sell power and natural gas are recorded as derivative assets or liabilities at estimated fair value with an offsetting regulatory asset or liability" (Avista Corporation 2019 Annual Report, 86). Mark-to-market gains and losses are accounted for each period.

r. Fair Value Measurements: See note 17 for fair value disclosures

s. Regulatory deferred charges or credits: prepared in accordance with regulatory requirements

t. Unamortized Debt Expense: includes debt issuance costs amortized over life of related debt

u. Unamortized Debt Repurchase Costs: accounted for by amortizing the premiums over the life of the debt

v. Appropriated Retained Earnings: any hydroelectric earnings in excess of the specified rate of return are kept in an appropriated earnings account until used in accordance with regulations

w. Contingencies: no significant amounts in 2019, see note 21 for further discussion

2. New Accounting Standards

   a. “Revenue from Contracts with Customers (Topic 606)” was adopted 1/1/2018. Modified retrospective approach was applied, the company does not expect changes going forward as a result of the adoption of this standard.

   b. Changes in leasing standards have been adopted and right-of-use assets will be accounted for as applicable under GAAP. “Accounting for finance leases (formerly capital leases) remained substantially unchanged” (Avista Corporation 2019 Annual Report, 88).

   c. Compensation-Retirement Benefits (Topic 715) caused reclassification of $7.7 million from utility other operating expenses to other expense (income)-net on the income statement. See note 11.

   d. Income Statement-Reporting Comprehensive Income (Topic 220): reclassified $1.7 million in tax benefits from accumulated other comprehensive loss to retained earnings at 12/31/2018.

   e. Fair Value Measurement (Topic 820) not adopted in 2019

   f. Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20) not adopted in 2019

3. Balance Sheet Components

a. Materials and Supplies, Fuel Stock and Stored Natural Gas: reported at average cost for regulated operations and LCM for non-regulated operations.

b. Other Current Assets

		2019		2018
Collateral posted for derivative instruments after netting with outstanding derivative liabilities	$	4,434	$	26,809
Prepayments		19,652		17,536
Income taxes receivable		11,047		822
Other		5,009		8,843
Total	$	40,142	$	54,010

Figure 13

c. Other Property and Investments—Net and Other Non-Current Assets

		2019		2018
Operating lease ROU assets	$	69,746	$	—
Finance lease ROU assets		50,980		—
Non-utility property		27,159		31,355
Equity investments		51,258		29,257
Investment in affiliated trust		11,547		11,547
Notes receivable		14,060		11,073
Deferred compensation assets		8,948		8,400
Other		23,394		23,065
Total	$	257,092	$	114,697

Figure 14

d. Other Current Liabilities

		2019		2018
Accrued taxes other than income taxes	$	36,965	$	36,858
Unsettled interest rate swap derivative liabilities		7,825		—
Employee paid time off accruals		22,343		20,992
Accrued interest		16,486		16,704
Pensions and other postretirement benefits		8,826		9,151
Utility energy commodity derivative liabilities		3,103		3,908
Other		35,431		32,745
Total	$	130,979	$	120,358

Figure 15

e. Other Non-Current Liabilities and Deferred Credits

	2019	2018
Operating lease liabilities	$ 65,565	$ —
Finance lease liabilities	51,750	—
Deferred investment tax credits	30,444	29,725
Asset retirement obligations	20,338	18,266
Derivative liabilities	19,685	10,300
Other	13,407	12,740
Total	$ 201,189	$ 71,031

Figure 16

4. Revenue: "ASC 606 defines the core principle of the revenue recognition model is that an entity should identify the various performance obligations in a contract, allocate the transaction price among the performance obligations and recognize revenue when (or as) the entity satisfies each performance obligation" (Avista Corporation 2019 Annual Report, 90). Performance obligations are analyzed and used in the accounting of the following areas:

   a. Utility revenues

   b. Non-Utility revenues

   c. Contracts with multiple performance obligations

   d. Significant judgments and unsatisfied performance obligations

   e. Disaggregation of total operating revenue

5. Leases: evaluated for operating or finance lease as follows

The components of lease expense were as follows for the year ended December 31, 2019 (dollars in thousands):

	2019
Operating lease cost:	
Fixed lease cost (Other operating expenses)	$ 4,425
Variable lease cost (Other operating expenses)	988
Total operating lease cost	$ 5,413
Finance lease cost:	
Amortization of ROU asset (Depreciation and amortization)	$ 3,641
Interest on lease liabilities (Interest expense)	2,795
Total finance lease cost	$ 6,436

Figure 17

6. Variable Interest Entities

    a. Power purchase agreement for Lancaster Plant at 270MW to purchase all output energy is a VIE.

    b. Limited Partnerships and Similar Entities: "For seven of the ten VIEs, Avista Corp. does not have any additional commitments beyond its initial investment. For the other three VIEs, as of December 31, 2019, Avista Corp. has invested $40.2 million, leaving $43.2 million remaining to be invested. In addition, the Company is not allowed to withdraw any capital contributions from the investment funds until after the funds' expiration dates and all liabilities of the funds are settled" (Avista Corporation 2019 Annual Report, 95).

7. Derivatives and Risk Management

    a. Energy Commodity Derivatives are used to hedge risk

    b. Foreign Currency Derivatives are used to hedge risk

    c. Interest Rate Swap Derivatives are used to hedge risk

8. Jointly Owned Electric Facilities

    a. Ownership, costs, and revenues are shared for utility plant in Colstrip, Montana

9. Property, Plant and Equipment

    a. Detailed breakdown of property, plant, and equipment

10. Asset Retirement Obligations

    a. AROs can be estimated for:

        1. Restore coal ash containment ponds and holding areas

2. Cap a landfill

3. Remove plant and restore land upon termination of land lease

b. AROs cannot be estimated for:

1. Removal and disposal of certain distribution assets

2. Abandonment and decommissioning of certain hydroelectric natural gas facilities

11. Pension Plans and Other Postretirement Benefit Plans

a. Defined benefit pension plan covering majority of full-time employees

b. Non-union employees hired after 1/1/2014 participate in a defined contribution 401(k) plan

c. SERP for certain executive officers and key employees

d. Certain health care and life insurance benefits, health reimbursement arrangement, death benefits to beneficiaries of executive officers who die.

12. Accounting for Income Taxes

a. Net of DTA and DTL are calculated

b. Limited tax credits

13. Energy Purchase Contracts

a. Fuel purchase contracts

b. Purchase or exchange of electricity

14. Committed Lines of Credit

a. Committed line of credit with various institutions for a total of $400 million expires April 2021, secured by first mortgage bonds in the event of default

b. The credit agreement has a covenant which does not permit the ratio of "consolidated total debt" to "consolidated total capitalization" of Avista Corp. to be greater than 65 percent at any time. As of December 31, 2019, the Company was in compliance with this covenant.

c. AEL&P line of credit for $25 million expires 11/2024 secured by first mortgage bonds.

15. Long-Term Debt

a. First Mortgage Bonds

b. Secured Notes

c. Secured Bonds

d. Unsecured Term Loans

e. Capital lease obligations

16. Long-Term Debt to Affiliated Trusts

a. Preferred Trust Securities

17. Fair Value

a. The fair value hierarchy prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to fair values derived from unobservable inputs (Level 3 measurements).

18. Common Stock

a. Equity Issuance in 2019 for total net proceeds of $64.6 million

b. Dividend policy is impacted by

1. Covenants on preferred stock
2. Covenants on long-term debt
3. Various regulatory requirements

19. Accumulated Other Comprehensive Loss is computed in accordance with GAAP

20. Earnings Per Common Share Attributable to Avista Corporation Shareholders

The following table presents the computation of basic and diluted earnings per common share attributable to Avista Corp. shareholders for the years ended December 31 (in thousands, except per share amounts):

	2019	2018	2017
Numerator:			
Net income attributable to Avista Corp. shareholders	$ 196,979	$ 136,429	$ 115,916
Denominator:			
Weighted-average number of common shares outstanding—basic	66,205	65,673	64,496
Effect of dilutive securities:			
Performance and restricted stock awards	124	273	310
Weighted-average number of common shares outstanding—diluted	66,329	65,946	64,806
Earnings per common share attributable to Avista Corp. shareholders:			
Basic	$ 2.98	$ 2.08	$ 1.80
Diluted	$ 2.97	$ 2.07	$ 1.79

There were no shares excluded from the calculation because they were antidilutive.

Figure 18

21. Commitments and Contingencies

a. Collective Bargaining agreements represent about 45% of employees

b. Legal proceedings related to note 24.

c. Washington general rate changes

d. Negligence resulting in Boyds Fire

e. Other contingencies

22. Regulatory Matters

a. Power Cost Deferrals and Recovery Mechanisms

b. Natural Gas Cost Deferrals and Recovery Mechanisms

c. Decoupling and Earnings Sharing Mechanisms

	December 31, 2019	December 31, 2018
Washington		
Decoupling surcharge	$ 22,440	$ 12,671
Provision for earnings sharing rebate	—	(693)
Idaho		
Decoupling surcharge	$ 2,549	$ 2,150
Provision for earnings sharing rebate	(686)	(774)
Oregon		
Decoupling rebate	$ (739)	$ (898)
Provision for earnings sharing rebate	—	—

Figure 19

23. Information by Business Segments contains financial information that breaks down the different segments of Avista's company.
24. Termination of Proposed Acquisitions by Hydro One
    a. Termination of the merger agreement because the regulatory commissions denied the proposition.
    b. Due to denial, all proposed contracts that were part of the agreement are gone.
25. Sale of METALfx closed on April 18, 2019 for $17.5 million plus cash on-hand for an after-tax gain of $3.3 million.
26. Selected Quarterly Financial Data (Unaudited) contains a summary of quarterly unaudited financial information.

(Avista Corporation 2019 Annual Report, 82-125)

External Auditor

Deloitte & Touche LLP

Unqualified opinion

Internal controls appear to be operating effectively based on applicable framework

Quality of Earnings

Operating income	196,763,000
/ Annual net cash flows from operations	398,212,000
Result should be near 1	0.49

The result of 0.49 indicates that management may be using their discretion to smooth earnings or delay revenues, this may be partially due to the highly regulated nature of the electricity and will have to be considered when evaluating Avista's financial statements. However, the auditors have expressed an unqualified opinion which means they do not believe that the financial statements are being materially misrepresented.

HISTORICAL FINANCIAL ANALYSIS

ALLETE vs Avista

Horizontal analysis

The following percentages are based on the percent of the related item from base year 2015. For instance, if the current period (2019) has 85% of net sales, that means the net sales are 15% lower than they were in 2015.

ALE's current net sales are 83.46% and Avista's current net sales are 90.63%. This shows that both companies are earning less than they were 5 years ago. This is interesting when compared to net income because ALE's current net income is 131.54% and Avista's current net income is 159.85%. This shows that despite losing overall sales revenue both companies are more profitable after expenses and taxes. While ALE is not performing as well as Avista in this aspect, ALE has a more consistent trend of upwards net income percentage.

ALE is currently experiencing a significant increase in debt coming due compared to five years ago, this is evident in their current maturities percentages as they have spiked up past 500% in two of the last 4 years when there was debt coming due in the amounts of $187.7 million and $212.9 million. Avista had one year in which they had a large amount of debt coming due, in the amount of $277.4 million. The fact that both companies are paying off their debt is a good thing. ALE has less outstanding long-term liabilities than Avista, with $264 million and $361.2 million, respectively.

The following tables summarize information presented in this section

	ALLETE	Avista
Net sales compared to five years ago	83.46%	90.63%
Net income compared to five years ago	131.54%	159.85%
Outstanding long-term liabilities (millions)	$264.0	$361.2

For more information and ratios found in the horizontal analysis see Appendix A2 and A7.

Vertical analysis

All following percentages (in this section) are based on the average percent of net sales over the last five years unless otherwise marked.

Over the past five years ALE's average cost of goods sold has been 85.06%, this is higher than the average for Avista of 81.66%. This means that over the last five years ALE's average gross profit has been 14.94%, which is considerably below the average for Avista of 18.34%. This means that ALE is providing better cost of service to their customers, which is probably a good thing in an industry that is so highly regulated to protect customers.

ALE's interest expense is also considerably lower than Avista's. Over the past five years ALE has averaged 4.83% of net sales as interest expense which is 1.79% below Avista's average of 6.62%. This means that ALE is managing less debt.

ALE has averaged a net income of 11.96% of sales over the last five years, this is also better than Avista's 10.05% average. In this industry, where earning to equity ratios are regulated, it is expected that net income will stay around or below the 10% mark due to regulation. Again, a good sign for ALE.

ALE has maintained a high percent of construction in progress (CIP) to net sales over the last couple years. This is a good sign of growth in the utility industry. ALE's average CIP for the previous five years was 6.61% with the highest of the five years being the most recent year at 13.47%. Compared to Avista's average of 3.06% with a most recent year of only 2.71%. This is a sign that ALE could be prepared to grow more over the next few years than Avista.

Both companies have just under 30% of net sales of long-term debt. This is a regulated part of the electricity utilities industry, typically governed by a debt-to-equity ratio. However total long-term debt shows that ALE is keeping their overall debt under control better than Avista as ALE has a five-year average of only 52.29% vs Avista's 58.82%.

The following tables summarize information presented in this section. Averages over the past 5 years.

	ALLETE	Avista
Average COGS	85.06%	81.66%
Average gross profit	14.94%	18.34%
Average interest expense	4.83%	6.62%
Average Net income	11.96%	10.05%
Average construction in progress	6.61%	3.06%
Average long-term debt	52.29%	58.82%

For more information and ratios found in the vertical analysis see the appendix A2 and A7.

Financial ratios

Liquidity: liquidity is a measure of how able a company is to pay its debts. ALE's five-year average days sales in receivables is 32.74 and has been trending around this number with a low variance. This indicates a low risk of collecting receivables. Avista's five-year average days sales in receivables is 49.32 and has been trending around that number with a slightly higher variance than ALE. Based on this measure ALE is doing a better job collecting accounts receivable. ALE's A/R turnover has an average turnover of 11.24 compared to Avista's 7.47. Both companies currently have negative working capital which indicates that short term liabilities outweigh short term assets for both firms. ALE appears to keep more cash on hand than Avista as ALE's average cash ratio over the last five years is 0.20 compared to 0.04 for Avista. ALE has also had a higher average acid test than Avista, 0.54 vs 0.40, respectively. ALE also has a more favorable current ratio average at 0.90 vs Avista at 0.62.

Ability to pay long term debt: both companies have comparable times interest earned ratios, both averaging around 3.2. This indicates that they are keeping their interest in check and appears reasonable. ALE has kept a lower debt ratio over the last five years than Avista. ALE has maintained a debt ratio within a few percent of 60% and Avista has stayed within 1% of 69% each of the past five years. Summary table follows.

	ALLETE	Avista
Average days sales in receivables	32.74	49.32
Average A/R turnover	11.24	7.47
Average cash ratio	0.2	0.04
Average acid test	0.54	0.40
Average current ratio	0.9	0.62

Profitability: profitability indicates how well a company is turning their costs and expenses into a profit. Average gross profit was covered in the vertical analysis section. In summary, over the last five years ALE's average gross profit has been 14.94%, which is considerably below the average for Avista of 18.34%. Total asset turnover has been consistent for both companies over the last five years with very similar ratios. ALE's total asset turnover was 0.27 vs Avista's 0.26. Avista has a marginally higher average return on operating assets of 5.11% compared to ALE's average of 4.76%. Both companies also have a similar return on equity, both right around 8%.

	ALLETE	Avista
Total asset turnover	0.27	0.26
Average return on operating assets	5.11%	4.76%

For more information on financial ratios see Appendix A4 and A9

Additional ratios calculated for the three most recent periods

ALE has been decreasing their accounts payable turnover over the last three periods, from 9.13 to 5.11, this shows that ALE has been paying its suppliers more slowly than it has previously. For comparison, Avista has had a consistent accounts payable turnover ratio over the past three periods just above 7. This ratio shows that Avista has been more consistent and timelier in paying their suppliers and vendors over the last 3 periods. This is also evident in the days payable outstanding as ALE's has increased from 41.7 three years ago to 56.8 in the most recent period. Avista's has remained consistent from 33.9 three years ago to 35.4 in the most recent period.

ALE has had consistent earnings per share over the past three years from $3.39 per share in 2017 and 2018 and increasing to $3.59 per share in 2019. This indicates they are meeting goals and increasing their earnings. Avista has been making more progress in increasing their earnings per share with earnings per share of $1.80 in 2017, $2.08 in 2018, and $2.98 in 2019. This indicates that Avista has performed very strong over the past three years.

Earnings Per Share	2019	2018	2017
ALLETE	$3.59	$3.39	$3.39
Avista	$2.98	$2.08	$1.80

See Appendix A10-A12

Valuation

Using an analysis of an Excel valuation package, a conclusion has been made that indicates ALE common stock was overvalued at year end by $8.91. The year-end price closed at $81.39, and calculations indicate price should have been $72.48 (Appendix B4).

This year's valuation is based on a forecast of the next year's projected value of operations and FCF (Appendix B4), as well as this year's weighted average cost of capital (WACC).

The WACC is calculated as follows:

The market value of common stock is $4,207,863 based on a stock price as of 12/31/2019 of $81.39 with 51,700 shares outstanding. ALE estimated value of long-term debt is $1,400,900 (Appendix B3). The value of short-term debt is $212,900 (Appendix B3). There is no preferred stock. This allows for calculation of current percent of the firm financed with long term debt as 24.06%, which is used as the target. Since there is no preferred stock the percent of the firm financed with preferred stock is zero and the target is also zero. The current percent of the firm financed with short-term debt is 3.66% (Appendix B3), used as the target.

The cost of equity is calculated with three variables: the risk-free rate, beta, and market risk premium, 2.25% (US Department of Treasury),0.323 (Appendix B7-B8), and 5.75% (KPMG, 2), respectively. Beta was calculated using the SLOPE function in Microsoft Excel and 2019 daily closing prices of ALE and S&P500. The cost of equity is calculated as the risk-free rate plus the product of beta and market risk premium to equal 4.11%.

After tax cost of debt is calculated to be 4.59% for long-term and 4.06% for short-term debt.

Using the cost of equity, the target percent financed with short-term and long-term debts, and the after-tax cost of short-term and long-term debt the WACC formula gives a WACC of 4.22% (Appendix B3).

Based on the current year valuation, the stock should be priced close to the calculated value $72.48 (Appendix B4) at 2019 year-end.

A sensitivity analysis shows that stock value is very sensitive to changes in beta and that small changes in the beta will significantly change the WACC, which has a large impact on the estimated stock price.

Sensitivity to beta is shown here:

Beta	.323	.637	1.102
Stock Value	72.48	49.78	33.28

A percentage of sales approach is used to forecast annual operating expenses and non-annual cash working capital accounts. ALE uses debt financing as well as equity financing through common stock. ALE has not issued any preferred stock. The P/E ratio at the end of 2019 is 22.58 calculated with a share price of $81.39 and earnings of $3.59 per share (Appendix A10). This appears to be a reasonable P/E ratio for a utility company as Investopedia says the average for utility companies is about 28 (Maverick, J.). Sales growth is expected to remain consistent. ALE has a capital structure that complies with regulatory requirements. There may be room to grow fixed assets at a higher rate to accommodate increased renewable energy production however that would coincide with a reduction in existing non-renewable fixed assets, the rate used appears reasonable. Non-cash working capital accounts are estimated to vary with sales. Valuation spreadsheet and calculations are in Appendix B.

Conclusion

The purpose of this report was to analyze the publicly traded company ALLETE, Inc. and come to a buy, sell, or hold recommendation for the common stock if you are a current or potential future shareholder. This paper has used a variety of quantitative and qualitative information to evaluate the firm.

ALE was evaluated against a specific benchmark, Avista Corporation. The companies appear to have been well suited for comparison. Most of ALE's business is done in the electricity market and this paper has focused on the electricity segments of ALE.

Despite limits on prices that can be charged to customers, especially residential customers, it appears that ALE is a healthy, growing company. There are limits on earnings, and various liquidity and profitability ratios that keep the industry on a level playing field and protect electricity users. The electricity industry provides an essential service to residential, commercial, industrial, and municipal customers. The industry also helps to protect the nation's security by ensuring that power is provided safely and without interruption.

Most of the weight of the buy, sell, or hold recommendation has been based on an analysis of ALE's historical and current financial positions. Consideration was also given to qualitative factors of both ALE and Avista. After reading and understanding the contents contained in this report, a conclusion has been reached that if you currently own common stock of ALE, it is time to sell it. This is mainly because the stock appears to be overvalued based on this analysis, despite outperforming the benchmark, Avista. There does not appear to be enough evidence to support a stock price of $81.39 at 2019 year-end. The stock price calculated based on valuation spreadsheet should be much closer to $72.48. Take gains or losses now as the stock price may decrease to correct the price towards $72.48.

If any questions arise or any inconsistencies in the data are found, please contact the author of this paper, Alec Tolson at his MSUM email address: alec.tolson@go.minnstate.edu.

APPENDIX A: SUMMARIZED HISTORICAL FINANCIAL STATEMENTS

Avista Corp FINSAS

FinSAS Version 2003051213	**Input**				
Company:	**Avista Corp**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
INCOME STATEMENT	2019	2018	2017	2016	2015
Net Sales	1345622	1396893	1445929	1442483	1484776
Less: Cost of Goods Sold	1135233	1135780	1153750	1152680	1231562
Gross Profit	210389	261113	292179	289803	253214
Other Operating Revenue	0	0	0	0	0
Less: Operating Expenses	0	0	0	0	0
Operating Income	210389	261113	292179	289803	253214
Less: Interest Expense	104354	100936	96192	87130	80441
(no capitalized interest)					
Other Income (Expenses)	19102	2481	2703	12729	12846
Unusual or Infreq. Item;					
Gain (Loss)	103000	0	0	0	0
Equity in Earnings of Assoc.;					
Profit (Loss)	0	0	0	0	0
Income before Taxes	228137	162658	198690	215402	185619
Less:Taxes Related to Operations	31374	26060	82758	78086	67449
N.I. before Min. Ern.	196763	136598	115932	137316	118170
Minority Share of Earnings (Loss)	216	-169	-16	-88	-90
N.I. before Nonrecurring Items	196979	136429	115916	137228	118080
Oper. of Discontinued Segment;					
Income (Loss)	0	0	0	0	5147
Disposal of Discont. Segment;					
Gain (Loss)	0	0	0	0	0
Extraordinary Item;					
Gain (Loss)	0	0	0	0	0
Cum. Effect of Acct Change;					
Gain (Loss)	0	0	0	0	0
Net Income (Loss)	196979	136429	115916	137228	123227
BALANCE SHEET	2019	2018	2017	2016	2015
ASSETS					
Current Assets:					
Cash	9896	14656	16172	8507	10484
Marketable Securities	0	0	24991	11365	17943
Gross Receivables	169076	171057	191110	233556	198064
Less: Allowance for Bad Debts	2419	5233	5132	5026	4530
Net Trade Receivables	166657	165824	185978	228530	193534
Inventories	66583	63881	58075	53314	54148
Prepaid Expenses	0	0	0	0	0
Other Current Assets	61993	102562	52318	49625	29937
Total Current Assets	305129	346923	337534	351341	306046
Long-Term Assets:					
Net Tangible (Fixed) Assets (other than construction in progress)	4632066	4488332	4240971	3997026	3695906
Construction in Progress	164941	160598	157839	150474	202683
Intangible Assets	52426	57672	57672	57672	57672
Investments	257092	114697	95459	83771	71280
Other Nonoperating Assets	0	0	18967	16919	32420
Other Operating Assets	670802	614354	606290	652552	540642
Total Long-Term Assets	5777327	5435653	5177198	4958414	4600603
Total Assets	6082456	5782576	5514732	5309755	4906649
LIABILITIES AND EQUITY					
Current Liabilities:					
Accounts Payable	110219	108372	144763	146365	114349
Short Term Loans	185800	190000	105398	120000	105000
Current Maturity of L.t. Debt	52000	107645	277438	3287	93167
Other Current Liabilities	182694	233567	169903	137876	162164
Total Current Liabilities	530713	639584	697502	407528	474680
Long-Term Liabilities:					
Long-term Debt	1843768	1755529	1491799	1678717	1480111
Reserves	0	0	0	0	0
Deferred Liabilities	528513	487602	908949	840928	747477
Minority Interest	0	0	0	0	0
Redeemable Preferred	0	0	0	0	0
Other Long-term Liabilities	1240178	1125816	685998	734106	676094
Total Long-term Liabilities	3612459	3368947	3086746	3253751	2903682
Total Liabilities	4143172	4008531	3784248	3661279	3378362
Shareholders' Equity:					
Preferred Equity	0	0	0	0	0
Common Equity-incl. Ret. Ern.	1939284	1774045	1730484	1648476	1528287
Total Equity	1939284	1774045	1730484	1648476	1528287
Total Liabilities and Equity	6082456	5782576	5514732	5309755	4906649

FinSAS Version 2003051213	Source of Input
Company:	Avista Corp
Analyst:	Alec Tolson
Most Recent Year Available:	2019
Years Available for:	
Income Statement (1-5)	5
Balance Sheet (1-5)	5
=	
INCOME STATEMENT	
-	
Net Sales	total operating revenues
Less: Cost of Goods Sold	total operating expenses
Gross Profit	calculated
Other Operating Revenue	n/a
Less: Operating Expenses	n/a
Operating Income	calculated
Less: Interest Expense (no capitalized interest)	interest expense + interest expense to affiliated trusts
Other Income (Expenses)	Other expense (income) net + capitalized interest
Unusual or Infreq. Item; Gain (Loss)	merger termination fee
Equity in Earnings of Assoc.; Profit (Loss)	n/a
Income before Taxes	calculated
Less:Taxes Related to Operations	income tax expense
N.I. before Min. Ern.	calculated
Minority Share of Earnings (Loss)	Net loss attributible to noncontrolling interest
N.I. before Nonrecurring Items	calculated
Oper. of Discontinued Segment; Income (Loss)	net income from discontinued operations (note 5)
Disposal of Discont. Segment; Gain (Loss)	n/a
Extraordinary Item; Gain (Loss)	n/a
Cum. Effect of Acct Change; Gain (Loss)	n/a
Net Income (Loss)	Calculated
=	
BALANCE SHEET	
-	
ASSETS	
Current Assets:	
Cash	Cash & cash equivalents
Marketable Securities	Utility energy commodity derivative assets + regulatory asset for energy commodity derivatives + Investments & funds helf for clients
Gross Receivables	Accounts & notes receivable, gross + Income tax receivable
Less: Allowance for Bad Debts	Allowance
Net Trade Receivables	Calculated
Inventories	Materials & supplies, fuel stock & stored natural gas
Prepaid Expenses	n/a
Other Current Assets	Other current assets + regulatory assets
Total Current Assets	calculated
Long-Term Assets:	
Net Tangible (Fixed) Assets (other than CIP)	Utility plant in sesrvice - accumulated depreciation & ammortization
Construction in Progress	Construction work in progress
Intangible Assets	goodwill
Investments	Investments in exchange power net + Investments in affiliated trusts + Other property & investments net & other noncurrent assets + noncurrent utility energy commodity derivative assets
Other Nonoperating Assets	noncurrent regulatory assets for energy commodity derivatives
Other Operating Assets	long-term energ contract receivable of spokane energy + noncurrent regulatory assets + regulatory assets for deferred income tax + regulatory assets for pension & other postretirement benefits + regulatory asset for interest rate swaps + Other deferred charges
Total Long-Term Assets	calculated
Total Assets	calculated
LIABILITIES AND EQUITY	
Current Liabilities:	
Accounts Payable	AP + deffered natural gas
Short Term Loans	short term borrowings
Current Maturity of L.t. Debt	Current portion of LTD & capital leases
Other Current Liabilities	Other current liabilities + Regulatory liabilities + accrued taxes other than income taxes + unsettled interest rate swap derivative liabilities + employee pto accruals + accrued interest + pension & other postretirement benefits + utility energy comodity derivative liabilities
Total Current Liabilities	calculated
Long-Term Liabilities:	
Long-term Debt	Long-term debt & capital leases
Reserves	n/a
Deferred Liabilities	deffered income tax + regulatory liability for excess deferred income taaxes
Minority Interest	n/a
Redeemable Preferred	n/a
Other Long-term Liabilities	LTD to affiliated trusts + Regulatory liability for utility plant retirement costs + pensions & other post retirement costs + noncurrent regulatory liabilities + noncurrent interest swap derivative liabilities + other noncurrent liabilities
Total Long-term Liabilities	calculated
Total Liabilities	calculated
Shareholders' Equity:	
Preferred Equity	n/a
Common Equity-incl. Ret. Ern.	Common stock + AOCI + retained earnings + noncontrolling interest
Total Equity	calculated
Total Liabilities and Equity	calculated

FinSAS Version 2003051213	**Vertical Analysis**
Company:	**Avista Corp**
Analyst:	**Alec Tolson**
Most Recent Year Available:	**2019**
Years Available for:	
Income Statement (1-5)	5
Balance Sheet (1-5)	5

INCOME STATEMENT	2019	2018	2017	2016	2015
Net Sales	100.00%	100.00%	100.00%	100.00%	100.00%
Less: Cost of Goods Sold	84.36%	81.31%	79.79%	79.91%	82.95%
Gross Profit	15.64%	18.69%	20.21%	20.09%	17.05%
Other Operating Revenue	0.00%	0.00%	0.00%	0.00%	0.00%
Less: Operating Expenses	0.00%	0.00%	0.00%	0.00%	0.00%
Operating Income	15.64%	18.69%	20.21%	20.09%	17.05%
Less: Interest Expense	7.76%	7.23%	6.65%	6.04%	5.42%
(no capitalized interest)					
Other Income (Expenses)	1.42%	0.18%	0.19%	0.88%	0.87%
Unusual or Infreq. Item;					
Gain (Loss)	7.65%	0.00%	0.00%	0.00%	0.00%
Equity in Earnings of Assoc.;					
Profit (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Income before Taxes	16.95%	11.64%	13.74%	14.93%	12.50%
Less:Taxes Related to Operations	2.33%	1.87%	5.72%	5.41%	4.54%
N.I. before Min. Ern.	14.62%	9.78%	8.02%	9.52%	7.96%
Minority Share of Earnings (Loss)	0.02%	-0.01%	0.00%	-0.01%	-0.01%
N.I. before Nonrecurring Items	14.64%	9.77%	8.02%	9.51%	7.95%
Oper. of Discontinued Segment;					
Income (Loss)	0.00%	0.00%	0.00%	0.00%	0.35%
Disposal of Discont. Segment;					
Gain (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Extraordinary Item;					
Gain (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Cum. Effect of Acct Change;					
Gain (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Net Income (Loss)	14.64%	9.77%	8.02%	9.51%	8.30%

BALANCE SHEET	2019	2018	2017	2016	2015
ASSETS					
Current Assets:					
Cash	0.16%	0.25%	0.29%	0.16%	0.21%
Marketable Securities	0.00%	0.00%	0.45%	0.21%	0.37%
Gross Receivables	2.78%	2.96%	3.47%	4.40%	4.04%
Less: Allowance for Bad Debts	0.04%	0.09%	0.09%	0.09%	0.09%
Net Trade Receivables	2.74%	2.87%	3.37%	4.30%	3.94%
Inventories	1.09%	1.10%	1.05%	1.00%	1.10%
Prepaid Expenses	0.00%	0.00%	0.00%	0.00%	0.00%
Other Current Assets	1.02%	1.77%	0.95%	0.93%	0.61%
Total Current Assets	5.02%	6.00%	6.12%	6.62%	6.24%
Long-Term Assets:					
Net Tangible (Fixed) Assets (other than construction in progress)	76.15%	77.62%	76.90%	75.28%	75.32%
Construction in Progress	2.71%	2.78%	2.86%	2.83%	4.13%
Intangible Assets	0.86%	1.00%	1.05%	1.09%	1.18%
Investments	4.23%	1.98%	1.73%	1.58%	1.45%
Other Nonoperating Assets	0.00%	0.00%	0.34%	0.32%	0.66%
Other Operating Assets	11.03%	10.62%	10.99%	12.29%	11.02%
Total Long-Term Assets	94.98%	94.00%	93.88%	93.38%	93.76%
Total Assets	100.00%	100.00%	100.00%	100.00%	100.00%
LIABILITIES AND EQUITY					
Current Liabilities:					
Accounts Payable	1.81%	1.87%	2.63%	2.76%	2.33%
Short Term Loans	3.05%	3.29%	1.91%	2.26%	2.14%
Current Maturity of L.t. Debt	0.85%	1.86%	5.03%	0.06%	1.90%
Other Current Liabilities	3.00%	4.04%	3.08%	2.60%	3.30%
Total Current Liabilities	8.73%	11.06%	12.65%	7.68%	9.67%
Long-Term Liabilities:					
Long-term Debt	30.31%	30.36%	27.05%	31.62%	30.17%
Reserves	0.00%	0.00%	0.00%	0.00%	0.00%
Deferred Liabilities	8.69%	8.43%	16.48%	15.84%	15.23%
Minority Interest	0.00%	0.00%	0.00%	0.00%	0.00%
Redeemable Preferred	0.00%	0.00%	0.00%	0.00%	0.00%
Other Long-term Liabilities	20.39%	19.47%	12.44%	13.83%	13.78%
Total Long-term Liabilities	59.39%	58.26%	55.97%	61.28%	59.18%
Total Liabilities	68.12%	69.32%	68.62%	68.95%	68.85%
Shareholders' Equity:					
Preferred Equity	0.00%	0.00%	0.00%	0.00%	0.00%
Common Equity-incl. Ret. Ern.	31.88%	30.68%	31.38%	31.05%	31.15%
Total Equity	31.88%	30.68%	31.38%	31.05%	31.15%
Total Liabilities and Equity	100.00%	100.00%	100.00%	100.00%	100.00%

FinSAS Version 2003051213	**Horizontal Analysis**
Company:	**Avista Corp**
Analyst:	**Alec Tolson**
Most Recent Year Available:	**2019**
Years Available for:	
Income Statement (1-5)	5
Balance Sheet (1-5)	5

INCOME STATEMENT	2019	2018	2017	2016	2015
Net Sales	90.63%	94.08%	97.38%	97.15%	100.00%
Less: Cost of Goods Sold	92.18%	92.22%	93.68%	93.59%	100.00%
Gross Profit	83.09%	103.12%	115.39%	114.45%	100.00%
Other Operating Revenue	#N/A	#N/A	#N/A	#N/A	#N/A
Less: Operating Expenses	#N/A	#N/A	#N/A	#N/A	#N/A
Operating Income	83.09%	103.12%	115.39%	114.45%	100.00%
Less: Interest Expense	129.73%	125.48%	119.58%	108.32%	100.00%
(no capitalized interest)					
Other Income (Expenses)	148.70%	19.31%	21.04%	99.09%	100.00%
Unusual or Infreq. Item;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Equity in Earnings of Assoc.;					
Profit (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Income before Taxes	122.91%	87.63%	107.04%	116.05%	100.00%
Less:Taxes Related to Operations	46.52%	38.64%	122.70%	115.77%	100.00%
N.I. before Min. Ern.	166.51%	115.59%	98.11%	116.20%	100.00%
Minority Share of Earnings (Loss)	-240.00%	187.78%	17.78%	97.78%	100.00%
N.I. before Nonrecurring Items	166.82%	115.54%	98.17%	116.22%	100.00%
Oper. of Discontinued Segment;					
Income (Loss)	0.00%	0.00%	0.00%	0.00%	100.00%
Disposal of Discont. Segment;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Extraordinary Item;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Cum. Effect of Acct Change;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Net Income (Loss)	159.85%	110.71%	94.07%	111.36%	100.00%

BALANCE SHEET	2019	2018	2017	2016	2015
ASSETS					
Current Assets:					
Cash	94.39%	139.79%	154.25%	81.14%	100.00%
Marketable Securities	0.00%	0.00%	139.28%	63.34%	100.00%
Gross Receivables	85.36%	86.36%	96.49%	117.92%	100.00%
Less: Allowance for Bad Debts	53.40%	115.52%	113.29%	110.95%	100.00%
Net Trade Receivables	86.11%	85.68%	96.10%	118.08%	100.00%
Inventories	122.96%	117.97%	107.25%	98.46%	100.00%
Prepaid Expenses	#N/A	#N/A	#N/A	#N/A	#N/A
Other Current Assets	207.08%	342.59%	174.76%	165.76%	100.00%
Total Current Assets	99.70%	113.36%	110.29%	114.80%	100.00%
Long-Term Assets:					
Net Tangible (Fixed) Assets (other than construction in progress)	125.33%	121.44%	114.75%	108.15%	100.00%
Construction in Progress	81.38%	79.24%	77.87%	74.24%	100.00%
Intangible Assets	90.90%	100.00%	100.00%	100.00%	100.00%
Investments	360.68%	160.91%	133.92%	117.52%	100.00%
Other Nonoperating Assets	0.00%	0.00%	58.50%	52.19%	100.00%
Other Operating Assets	124.08%	113.63%	112.14%	120.70%	100.00%
Total Long-Term Assets	125.58%	118.15%	112.53%	107.78%	100.00%
Total Assets	123.96%	117.85%	112.39%	108.22%	100.00%
LIABILITIES AND EQUITY					
Current Liabilities:					
Accounts Payable	96.39%	94.77%	126.60%	128.00%	100.00%
Short Term Loans	176.95%	180.95%	100.38%	114.29%	100.00%
Current Maturity of L.t. Debt	55.81%	115.54%	297.79%	3.53%	100.00%
Other Current Liabilities	112.66%	144.03%	104.77%	85.02%	100.00%
Total Current Liabilities	111.80%	134.74%	146.94%	85.85%	100.00%
Long-Term Liabilities:					
Long-term Debt	124.57%	118.61%	100.79%	113.42%	100.00%
Reserves	#N/A	#N/A	#N/A	#N/A	#N/A
Deferred Liabilities	70.71%	65.23%	121.60%	112.50%	100.00%
Minority Interest	#N/A	#N/A	#N/A	#N/A	#N/A
Redeemable Preferred	#N/A	#N/A	#N/A	#N/A	#N/A
Other Long-term Liabilities	183.43%	166.52%	101.46%	108.58%	100.00%
Total Long-term Liabilities	124.41%	116.02%	106.30%	112.06%	100.00%
Total Liabilities	122.64%	118.65%	112.01%	108.37%	100.00%
Shareholders' Equity:					
Preferred Equity	#N/A	#N/A	#N/A	#N/A	#N/A
Common Equity-incl. Ret. Ern.	126.89%	116.08%	113.23%	107.86%	100.00%
Total Equity	126.89%	116.08%	113.23%	107.86%	100.00%
Total Liabilities and Equity	123.96%	117.85%	112.39%	108.22%	100.00%

FinSAS Version 2003051213	**Ratios - average**				
Company:	**Avista Corp**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
LIQUIDITY	2019	2018	2017	2016	2015
Days' Sales in Receivables	45.86	44.70	48.24	59.10	48.69
Accounts Receivable Turnover	7.91	7.71	6.81	6.68	
A/R Turnover in Days	46.13	47.32	53.60	54.61	
Days' Sales in Inventory	21.41	20.53	18.37	16.88	16.05
Inventory Turnover	17.40	18.63	20.72	21.45	
Inventory Turnover in Days	20.97	19.60	17.62	17.01	
Operating Cycle	67.10	66.91	71.22	71.62	
Working Capital	(225,584)	(292,661)	(359,968)	(56,187)	(168,634)
Current Ratio	0.57	0.54	0.48	0.86	0.64
Acid Test	0.33	0.28	0.33	0.61	0.47
Cash Ratio	0.02	0.02	0.06	0.05	0.06
Sales to Working Capital	-5.19	-4.28	-6.95	-12.83	
Cash Flow/Cur. Mat. of Debt & NP	0.00	0.00	0.00	0.00	0.00
LONG-TERM DEBT-PAYING ABILITY	2019	2018	2017	2016	2015
Times Interest Earned	3.19	2.61	3.07	3.47	3.31
Fixed Charge Coverage	3.19	2.61	3.07	3.47	3.31
Debt Ratio	68.12%	69.32%	68.62%	68.95%	68.85%
Debt/Equity	213.64%	225.95%	218.68%	222.10%	221.06%
Debt to Tangible Net Worth	219.58%	233.55%	226.22%	230.15%	229.72%
Cash Flow/Total Debt	0.00%	0.00%	0.00%	0.00%	0.00%
PROFITABILITY	2019	2018	2017	2016	2015
Net Profit Margin	14.62%	9.78%	8.02%	9.52%	7.96%
Total Asset Turnover	0.23	0.25	0.27	0.28	
Return on Assets	3.32%	2.42%	2.14%	2.69%	
Operating Income Margin	15.64%	18.69%	20.21%	20.09%	17.05%
Operating Asset Turnover	0.24	0.26	0.28	0.30	
Return on Operating Assets	3.81%	4.91%	5.74%	6.07%	
Sales to Fixed Assets	0.30	0.32	0.35	0.38	
Return on Investment	5.63%	4.77%	4.36%	4.81%	
Return on Total Equity	10.61%	7.79%	6.86%	8.64%	
Return on Common Equity	10.61%	7.79%	6.86%	8.64%	
Gross Profit Margin	15.64%	18.69%	20.21%	20.09%	17.05%
INVESTOR ANALYSIS	2019	2018	2017	2016	2015
Degree of Financial Leverage	1.46	1.62	1.48	1.40	1.43

FinSAS Version 2003051213	**Ratios - ending**				
Company:	**Avista Corp**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
* EOY values instead of averages					
LIQUIDITY	2019	2018	2017	2016	2015
Days' Sales in Receivables	45.86	44.70	48.24	59.10	48.69
* Accounts Receivable Turnover	7.96	8.17	7.57	6.18	7.50
* A/R Turnover in Days	45.86	44.70	48.24	59.10	48.69
Days' Sales in Inventory	21.41	20.53	18.37	16.88	16.05
* Inventory Turnover	17.05	17.78	19.87	21.62	22.74
* Inventory Turnover in Days	21.41	20.53	18.37	16.88	16.05
* Operating Cycle	67.27	65.23	66.62	75.98	64.74
Working Capital	(225,584)	(292,661)	(359,968)	(56,187)	(168,634)
Current Ratio	0.57	0.54	0.48	0.86	0.64
Acid Test	0.33	0.28	0.33	0.61	0.47
Cash Ratio	0.02	0.02	0.06	0.05	0.06
* Sales to Working Capital	-5.97	-4.77	-4.02	-25.67	-8.80
Cash Flow/Cur. Mat. of Debt & NP	-	-	-	-	-
LONG-TERM DEBT-PAYING ABILITY	2019	2018	2017	2016	2015
Times Interest Earned	3.19	2.61	3.07	3.47	3.31
Fixed Charge Coverage	3.19	2.61	3.07	3.47	3.31
Debt Ratio	68.12%	69.32%	68.62%	68.95%	68.85%
Debt/Equity	213.64%	225.95%	218.68%	222.10%	221.06%
Debt to Tangible Net Worth	219.58%	233.55%	226.22%	230.15%	229.72%
Cash Flow/Total Debt	0.00%	0.00%	0.00%	0.00%	0.00%
PROFITABILITY	2019	2018	2017	2016	2015
Net Profit Margin	14.62%	9.78%	8.02%	9.52%	7.96%
* Total Asset Turnover	0.22	0.24	0.26	0.27	0.30
* Return on Assets	3.23%	2.36%	2.10%	2.59%	2.41%
Operating Income Margin	15.64%	18.69%	20.21%	20.09%	17.05%
* Operating Asset Turnover	0.24	0.26	0.28	0.29	0.33
* Return on Operating Assets	3.75%	4.79%	5.64%	5.79%	5.57%
* Sales to Fixed Assets	0.29	0.31	0.34	0.36	0.40
* Return on Investment	5.42%	4.62%	4.40%	4.58%	4.48%
* Return on Total Equity	10.16%	7.69%	6.70%	8.32%	7.73%
* Return on Common Equity	10.16%	7.69%	6.70%	8.32%	7.73%
Gross Profit Margin	15.64%	18.69%	20.21%	20.09%	17.05%
INVESTOR ANALYSIS	2019	2018	2017	2016	2015
Degree of Financial Leverage	1.46	1.62	1.48	1.40	1.43

FinSAS Version 2003051213	**Documentation**
LIQUIDITY	
Days' Sales in Receivables	Gross Receivables ------------------------ Net Sales / 365
Accounts Receivable Turnover	Net Sales ------------------------------------ Average (Gross Receivables)
A/R Turnover in Days	365 -- Accounts Receivable Turnover
Days' Sales in Inventory	Ending Inventory -------------------------------- Cost of Goods Sold / 365
Inventory Turnover	Cost of Goods Sold ------------------------------ Average (Inventories)
Inventory Turnover in Days	365 ---------------------------------- Inventory Turnover
Operating Cycle	A/R Turnover in Days + Inventory Turnover in Days
Working Capital	Total Current Assets - Total Current Liabilities
Current Ratio	Total Current Assets ------------------------------- Total Current Liabilities
Acid Test	Cash + Marketable Securities + Net Trade Receivables -- Total Current Liabilities
Cash Ratio	Cash + Marketable Securities --- Total Current Liabilities
Sales to Working Capital	Net Sales --------------------------------- Average (Working Capital)
Cash Flow/Cur. Mat. of Debt & NP	Cash Flow from Operations --- Short Term Loans + Current Maturity of L.t. Debt
LONG-TERM DEBT-PAYING ABILITY	
Times Interest Earned	Income before Taxes + Interest Expense (no capitalized interest) - Equity in Earnings of Assoc.; Profit (Loss) -- Interest Expense (no capitalized interest) + Capitalized Interest
Fixed Charge Coverage	Income before Taxes + Interest Expense (no capitalized interest) - Equity in Earnings of Assoc.; Profit (Loss) + Interest Portion of Rentals -- Interest Expense (no capitalized interest) + Capitalized Interest + Interest Portion of Rentals
Debt Ratio	Total Liabilities ---------------------------- Total Assets
Debt/Equity	Total Liabilities --------------------- Total Equity
Debt to Tangible Net Worth	Total Liabilities --- Total Equity - Intangible Assets
Cash Flow/Total Debt	Cash Flow from Operations ----------------------------------- Total Liabilities
PROFITABILITY	
Net Profit Margin	N.I. before Min. Ern. – Equity in Earnings of Assoc.; Profit (Loss) --- Net Sales
Total Asset Turnover	Net Sales ----------------------------- Average (Total Assets)
Return on Assets	N.I. before Min. Ern. ------------------------- Average (Total Assets)
Operating Income Margin	Operating Income ---------------------- Net Sales
Operating Asset Turnover	Net Sales -- Average (Total Assets - Construction in Progress - Intangible Assets - Investments - Other Nonoperating Assets)
Return on Operating Assets	Operating Income -- Average (Total Assets - Construction in Progress - Intangible Assets - Investments - Other Nonoperating Assets)
Sales to Fixed Assets	Net Sales -- Average (Net Tangible (Fixed) Assets (other than construction in progress))
Return on Investment	N.I. before Min. Ern. + {(1- Tax Rate) * Interest Expense (no capitalized interest)} --- Average (Total Liabilities and Equity - Total Current Liabilities)
Return on Total Equity	N.I. before Nonrecurring Items - Dividends on Redeemable Pref. --- Average (Total Equity)
Return on Common Equity	N.I. before Nonrecurring Items - Dividends on Redeemable Pref. - Dividends on Nonredeemable Pref. --- Average (Common Equity-incl. Ret. Ern.)
Gross Profit Margin	Gross Profit ------------------- Net Sales
INVESTOR ANALYSIS	
Degree of Financial Leverage	Income before Taxes + Interest Expense (no capitalized interest) - Equity in Earnings of Assoc.; Profit (Loss) -- Income before Taxes - Equity in Earnings of Assoc.; Profit (Loss)
Earnings per Share	Dil. Earn. per Sh. before Nonrec. Items
Price/Earnings Ratio	Market Price per Common Share -- Dil. Earn. per Sh. before Nonrec. Items
Percentage of Earnings Retained	N.I. before Nonrecurring Items - Total Cash Dividends -- N.I. before Nonrecurring Items
Dividend Payout	Dividends per Common Share -- Dil. Earn. per Sh. before Nonrec. Items
Dividend Yield	Dividends per Common Share -- Market Price per Common Share
Book Value per Share	Common Equity-incl. Ret. Ern. --- Common Shares Outstanding
Materiality of Options	Net income not including opt. exp. - Net income including opt. exp. --- Net income not including opt. exp.
Oper. Cash Flow per Share	Cash Flow from Operations - Dividends on Redeemable Pref. - Dividends on Nonredeemable Pref. --- Diluted Weighted Average Common Shares
Oper. Cash Flow/Cash Dividends	Cash Flow from Operations ------------------------------------ Total Cash Dividends
Year-end Market Price	Market Price per Common Share
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ALLETE, Inc

FINSAS

FinSAS Version 2003051213	**Input**				
Company:	**Allete Inc.**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
INCOME STATEMENT	2019	2018	2017	2016	2015
Net Sales	1240500	1498600	1419300	1339700	1486400
Less: Cost of Goods Sold	1060700	1297400	1193400	1116200	1275700
Gross Profit	179800	201200	225900	223500	210700
Other Operating Revenue	0	0	0	0	0
Less: Operating Expenses	0	0	0	0	0
Operating Income	179800	201200	225900	223500	210700
Less: Interest Expense	64900	67900	67800	70300	64900
(no capitalized interest)					
Other Income (Expenses)	18700	7800	6300	3900	4700
Unusual or Infreq. Item;					
Gain (Loss)	23600	0	0	0	0
Equity in Earnings of Assoc.;					
Profit (Loss)	21700	17500	22500	18500	16300
Income before Taxes	178900	158600	186900	175600	166800
Less:Taxes Related to Operations	-6600	-15500	14700	19800	25300
N.I. before Min. Ern.	185500	174100	172200	155800	141500
Minority Share of Earnings (Loss)	100	0	0	-500	-400
N.I. before Nonrecurring Items	185600	174100	172200	155300	141100
Oper. of Discontinued Segment;					
Income (Loss)	0	0	0	0	0
Disposal of Discont. Segment;					
Gain (Loss)	0	0	0	0	0
Extraordinary Item;					
Gain (Loss)	0	0	0	0	0
Cum. Effect of Acct Change;					
Gain (Loss)	0	0	0	0	0
Net Income (Loss)	185600	174100	172200	155300	141100
BALANCE SHEET	2019	2018	2017	2016	2015
ASSETS					
Current Assets:					
Cash	69300	69100	98900	27500	97000
Marketable Securities	0	0	0	0	0
Gross Receivables	97300	146100	137200	125600	122200
Less: Allowance for Bad Debts	900	1700	2100	3100	1000
Net Trade Receivables	96400	144400	135100	122500	121200
Inventories	72800	86700	95900	104200	117100
Prepaid Expenses	31000	34100	37600	40300	35700
Other Current Assets	0	0	0	0	0
Total Current Assets	269500	334300	367500	294500	371000
Long-Term Assets:					
Net Tangible (Fixed) Assets (other than construction in progress)	3638300	3482200	3550900	3553200	3559400
Construction in Progress	738700	422200	271500	188000	109700
Intangible Assets	1000	223300	225900	213400	215200
Investments	219500	210200	171800	191200	199100
Other Nonoperating Assets	20400	0	8600	8600	0
Other Operating Assets	595400	492800	483800	457500	452700
Total Long-Term Assets	5213300	4830700	4712500	4611900	4536100
Total Assets	5482800	5165000	5080000	4906400	4907100
LIABILITIES AND EQUITY					
Current Liabilities:					
Accounts Payable	234100	219100	203900	138100	151400
Short Term Loans	0	0	0	0	1600
Current Maturity of L.t. Debt	212900	57500	64100	187700	36300
Other Current Liabilities	60400	128500	83200	73700	86100
Total Current Liabilities	507400	405100	351200	399500	275400
Long-Term Liabilities:					
Long-term Debt	1400900	1428500	1439200	1370400	1568700
Reserves	0	0	0	0	0
Deferred Liabilities	945900	913000	954300	920800	891600
Minority Interest	0	0	0	0	0
Redeemable Preferred	0	0	0	0	0
Other Long-term Liabilities	293000	262600	267100	322700	349000
Total Long-term Liabilities	2639800	2604100	2660600	2613900	2809300
Total Liabilities	3147200	3009200	3011800	3013400	3084700
Shareholders' Equity:					
Preferred Equity	0	0	0	0	0
Common Equity-incl. Ret. Ern.	2335600	2155800	2068200	1893000	1822400
Total Equity	2335600	2155800	2068200	1893000	1822400
Total Liabilities and Equity	5482800	5165000	5080000	4906400	4907100

FinSAS Version 2003051213	Source of Input
Company:	Allete Inc.
Analyst:	Alec Tolson
Most Recent Year Available:	2019
Years Available for:	
Income Statement (1-5)	5
Balance Sheet (1-5)	5
=	
INCOME STATEMENT	
-	
Net Sales	Total operating revenue
Less: Cost of Goods Sold	total operating expense
Gross Profit	
Other Operating Revenue	n/a
Less: Operating Expenses	n/a
Operating Income	calculated
Less: Interest Expense	interest expense
(no capitalized interest)	
Other Income (Expenses)	other
Unusual or Infreq. Item;	gain on sale of water services
Gain (Loss)	
Equity in Earnings of Assoc.;	Equity earnings
Profit (Loss)	
Income before Taxes	
Less:Taxes Related to Operations	Income tax expense (benefit)
N.I. before Min. Ern.	
Minority Share of Earnings (Loss)	Non-Controlling interest in subsidiary
N.I. before Nonrecurring Items	
Oper. of Discontinued Segment;	
Income (Loss)	n/a
Disposal of Discont. Segment;	
Gain (Loss)	n/a
Extraordinary Item;	
Gain (Loss)	n/a
Cum. Effect of Acct Change;	
Gain (Loss)	n/a
Net Income (Loss)	calculated
=	
BALANCE SHEET	
-	
ASSETS	
Current Assets:	
Cash	cash
Marketable Securities	n/a
Gross Receivables	Trade AR + Billed + unbilled
Less: Allowance for Bad Debts	allowance for doubtful accounts
Net Trade Receivables	calculated
Inventories	Inventories net
Prepaid Expenses	Prepayments
Other Current Assets	n/a
Total Current Assets	
Long-Term Assets:	
Net Tangible (Fixed) Assets (other than CIP)	Regulated operations PPE + allete clean energy PPE + corporate services PPE + US water services PPE - Total accumulated depreciation
Construction in Progress	Regulated operations CIP + allete clean energy CIP + corporate services CIP + US water services CIP
Intangible Assets	Goodwill and other intangibles
Investments	Investment in American Transmission Company LLC + Equity Investments + Total other investments + Allete Properties
Other Nonoperating Assets	Restricted cash
Other Operating Assets	Regulatory Assets + Contract payment + contract asets + financ receivable + operating lease right-of-use assets + Other postretirement benefit plans + Other assets
Total Long-Term Assets	calculated
Total Assets	calculated
LIABILITIES AND EQUITY	
Current Liabilities:	
Accounts Payable	accounts payable + accruals
Short Term Loans	Notes payable
Current Maturity of L.t. Debt	Long-term debt due within one year
Other Current Liabilities	Total other current Liabilities
Total Current Liabilities	
Long-Term Liabilities:	
Long-term Debt	Long-term debt
Reserves	n/a
Deferred Liabilities	Deferred LT Liabilitiess = Deferred income taxes + Regulatory liabilities + defined benefit pension & other postretirement benefit plans
Minority Interest	n/a
Redeemable Preferred	n/a
Other Long-term Liabilities	Total other non-current liabilities
Total Long-term Liabilities	calculated
Total Liabilities	calculated
Shareholders' Equity:	
Preferred Equity	n/a
Common Equity-incl. Ret. Ern.	common stock + unearned ESOP shares + unrealized g/l on AFS securities + Defined benefit pension & other postretirement plans + G/L on cash flow hedges + AOCI + RE + non-controlling interest in subsidiary
Total Equity	calculated
Total Liabilities and Equity	calculated

FinSAS Version 2003051213	**Vertical Analysis**				
Company:	**Allete Inc.**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
INCOME STATEMENT	2019	2018	2017	2016	2015
Net Sales	100.00%	100.00%	100.00%	100.00%	100.00%
Less: Cost of Goods Sold	85.51%	86.57%	84.08%	83.32%	85.82%
Gross Profit	14.49%	13.43%	15.92%	16.68%	14.18%
Other Operating Revenue	0.00%	0.00%	0.00%	0.00%	0.00%
Less: Operating Expenses	0.00%	0.00%	0.00%	0.00%	0.00%
Operating Income	14.49%	13.43%	15.92%	16.68%	14.18%
Less: Interest Expense	5.23%	4.53%	4.78%	5.25%	4.37%
(no capitalized interest)					
Other Income (Expenses)	1.51%	0.52%	0.44%	0.29%	0.32%
Unusual or Infreq. Item;					
Gain (Loss)	1.90%	0.00%	0.00%	0.00%	0.00%
Equity in Earnings of Assoc.;					
Profit (Loss)	1.75%	1.17%	1.59%	1.38%	1.10%
Income before Taxes	14.42%	10.58%	13.17%	13.11%	11.22%
Less:Taxes Related to Operations	-0.53%	-1.03%	1.04%	1.48%	1.70%
N.I. before Min. Ern.	14.95%	11.62%	12.13%	11.63%	9.52%
Minority Share of Earnings (Loss)	0.01%	0.00%	0.00%	-0.04%	-0.03%
N.I. before Nonrecurring Items	14.96%	11.62%	12.13%	11.59%	9.49%
Oper. of Discontinued Segment;					
Income (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Disposal of Discont. Segment;					
Gain (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Extraordinary Item;					
Gain (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Cum. Effect of Acct Change;					
Gain (Loss)	0.00%	0.00%	0.00%	0.00%	0.00%
Net Income (Loss)	14.96%	11.62%	12.13%	11.59%	9.49%
BALANCE SHEET	2019	2018	2017	2016	2015
ASSETS					
Current Assets:					
Cash	1.26%	1.34%	1.95%	0.56%	1.98%
Marketable Securities	0.00%	0.00%	0.00%	0.00%	0.00%
Gross Receivables	1.77%	2.83%	2.70%	2.56%	2.49%
Less: Allowance for Bad Debts	0.02%	0.03%	0.04%	0.06%	0.02%
Net Trade Receivables	1.76%	2.80%	2.66%	2.50%	2.47%
Inventories	1.33%	1.68%	1.89%	2.12%	2.39%
Prepaid Expenses	0.57%	0.66%	0.74%	0.82%	0.73%
Other Current Assets	0.00%	0.00%	0.00%	0.00%	0.00%
Total Current Assets	4.92%	6.47%	7.23%	6.00%	7.56%
Long-Term Assets:					
Net Tangible (Fixed) Assets (other than construction in progress)	66.36%	67.42%	69.90%	72.42%	72.54%
Construction in Progress	13.47%	8.17%	5.34%	3.83%	2.24%
Intangible Assets	0.02%	4.32%	4.45%	4.35%	4.39%
Investments	4.00%	4.07%	3.38%	3.90%	4.06%
Other Nonoperating Assets	0.37%	0.00%	0.17%	0.18%	0.00%
Other Operating Assets	10.86%	9.54%	9.52%	9.32%	9.23%
Total Long-Term Assets	95.08%	93.53%	92.77%	94.00%	92.44%
Total Assets	100.00%	100.00%	100.00%	100.00%	100.00%
LIABILITIES AND EQUITY					
Current Liabilities:					
Accounts Payable	4.27%	4.24%	4.01%	2.81%	3.09%
Short Term Loans	0.00%	0.00%	0.00%	0.00%	0.03%
Current Maturity of L.t. Debt	3.88%	1.11%	1.26%	3.83%	0.74%
Other Current Liabilities	1.10%	2.49%	1.64%	1.50%	1.75%
Total Current Liabilities	9.25%	7.84%	6.91%	8.14%	5.61%
Long-Term Liabilities:					
Long-term Debt	25.55%	27.66%	28.33%	27.93%	31.97%
Reserves	0.00%	0.00%	0.00%	0.00%	0.00%
Deferred Liabilities	17.25%	17.68%	18.79%	18.77%	18.17%
Minority Interest	0.00%	0.00%	0.00%	0.00%	0.00%
Redeemable Preferred	0.00%	0.00%	0.00%	0.00%	0.00%
Other Long-term Liabilities	5.34%	5.08%	5.26%	6.58%	7.11%
Total Long-term Liabilities	48.15%	50.42%	52.37%	53.28%	57.25%
Total Liabilities	57.40%	58.26%	59.29%	61.42%	62.86%
Shareholders' Equity:					
Preferred Equity	0.00%	0.00%	0.00%	0.00%	0.00%
Common Equity-incl. Ret. Ern.	42.60%	41.74%	40.71%	38.58%	37.14%
Total Equity	42.60%	41.74%	40.71%	38.58%	37.14%
Total Liabilities and Equity	100.00%	100.00%	100.00%	100.00%	100.00%

FinSAS Version 2003051213	**Horizontal Analysis**				
Company:	**Allete Inc.**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
INCOME STATEMENT	2019	2018	2017	2016	2015
Net Sales	83.46%	100.82%	95.49%	90.13%	100.00%
Less: Cost of Goods Sold	83.15%	101.70%	93.55%	87.50%	100.00%
Gross Profit	85.33%	95.49%	107.21%	106.07%	100.00%
Other Operating Revenue	#N/A	#N/A	#N/A	#N/A	#N/A
Less: Operating Expenses	#N/A	#N/A	#N/A	#N/A	#N/A
Operating Income	85.33%	95.49%	107.21%	106.07%	100.00%
Less: Interest Expense	100.00%	104.62%	104.47%	108.32%	100.00%
(no capitalized interest)					
Other Income (Expenses)	397.87%	165.96%	134.04%	82.98%	100.00%
Unusual or Infreq. Item;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Equity in Earnings of Assoc.;					
Profit (Loss)	133.13%	107.36%	138.04%	113.50%	100.00%
Income before Taxes	107.25%	95.08%	112.05%	105.28%	100.00%
Less:Taxes Related to Operations	-26.09%	-61.26%	58.10%	78.26%	100.00%
N.I. before Min. Ern.	131.10%	123.04%	121.70%	110.11%	100.00%
Minority Share of Earnings (Loss)	-25.00%	0.00%	0.00%	125.00%	100.00%
N.I. before Nonrecurring Items	131.54%	123.39%	122.04%	110.06%	100.00%
Oper. of Discontinued Segment;					
Income (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Disposal of Discont. Segment;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Extraordinary Item;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Cum. Effect of Acct Change;					
Gain (Loss)	#N/A	#N/A	#N/A	#N/A	#N/A
Net Income (Loss)	131.54%	123.39%	122.04%	110.06%	100.00%
BALANCE SHEET	2019	2018	2017	2016	2015
ASSETS					
Current Assets:					
Cash	71.44%	71.24%	101.96%	28.35%	100.00%
Marketable Securities	#N/A	#N/A	#N/A	#N/A	#N/A
Gross Receivables	79.62%	119.56%	112.27%	102.78%	100.00%
Less: Allowance for Bad Debts	90.00%	170.00%	210.00%	310.00%	100.00%
Net Trade Receivables	79.54%	119.14%	111.47%	101.07%	100.00%
Inventories	62.17%	74.04%	81.90%	88.98%	100.00%
Prepaid Expenses	86.83%	95.52%	105.32%	112.89%	100.00%
Other Current Assets	#N/A	#N/A	#N/A	#N/A	#N/A
Total Current Assets	72.64%	90.11%	99.06%	79.38%	100.00%
Long-Term Assets:					
Net Tangible (Fixed) Assets (other than construction in progress)	102.22%	97.83%	99.76%	99.83%	100.00%
Construction in Progress	673.38%	384.87%	247.49%	171.38%	100.00%
Intangible Assets	0.46%	103.76%	104.97%	99.16%	100.00%
Investments	110.25%	105.58%	86.29%	96.03%	100.00%
Other Nonoperating Assets	#N/A	#N/A	#N/A	#N/A	#N/A
Other Operating Assets	131.52%	108.86%	106.87%	101.06%	100.00%
Total Long-Term Assets	114.93%	106.49%	103.89%	101.67%	100.00%
Total Assets	111.73%	105.26%	103.52%	99.99%	100.00%
LIABILITIES AND EQUITY					
Current Liabilities:					
Accounts Payable	154.62%	144.72%	134.68%	91.22%	100.00%
Short Term Loans	0.00%	0.00%	0.00%	0.00%	100.00%
Current Maturity of L.t. Debt	586.50%	158.40%	176.58%	517.08%	100.00%
Other Current Liabilities	70.15%	149.25%	96.63%	85.60%	100.00%
Total Current Liabilities	184.24%	147.10%	127.52%	145.06%	100.00%
Long-Term Liabilities:					
Long-term Debt	89.30%	91.06%	91.74%	87.36%	100.00%
Reserves	#N/A	#N/A	#N/A	#N/A	#N/A
Deferred Liabilities	106.09%	102.40%	107.03%	103.28%	100.00%
Minority Interest	#N/A	#N/A	#N/A	#N/A	#N/A
Redeemable Preferred	#N/A	#N/A	#N/A	#N/A	#N/A
Other Long-term Liabilities	83.95%	75.24%	76.53%	92.46%	100.00%
Total Long-term Liabilities	93.97%	92.70%	94.71%	93.04%	100.00%
Total Liabilities	102.03%	97.55%	97.64%	97.69%	100.00%
Shareholders' Equity:					
Preferred Equity	#N/A	#N/A	#N/A	#N/A	#N/A
Common Equity-incl. Ret. Ern.	128.16%	118.29%	113.49%	103.87%	100.00%
Total Equity	128.16%	118.29%	113.49%	103.87%	100.00%
Total Liabilities and Equity	111.73%	105.26%	103.52%	99.99%	100.00%

FinSAS Version 2003051213	**Ratios - average**				
Company:	**Allete Inc.**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
LIQUIDITY	2019	2018	2017	2016	2015
Days' Sales in Receivables	28.63	35.58	35.28	34.22	30.01
Accounts Receivable Turnover	10.19	10.58	10.80	10.81	
A/R Turnover in Days	35.81	34.50	33.79	33.76	
Days' Sales in Inventory	25.05	24.39	29.33	34.07	33.50
Inventory Turnover	13.30	14.21	11.93	10.09	
Inventory Turnover in Days	27.44	25.69	30.60	36.18	
Operating Cycle	63.25	60.19	64.39	69.94	
Working Capital	(237,900)	(70,800)	16,300	(105,000)	95,600
Current Ratio	0.53	0.83	1.05	0.74	1.35
Acid Test	0.33	0.53	0.67	0.38	0.79
Cash Ratio	0.14	0.17	0.28	0.07	0.35
Sales to Working Capital	-8.04	-54.99	-32.00	-285.04	
Cash Flow/Cur. Mat. of Debt & NP	0.00	0.00	0.00	0.00	0.00
LONG-TERM DEBT-PAYING ABILITY	2019	2018	2017	2016	2015
Times Interest Earned	3.42	3.08	3.42	3.23	3.32
Fixed Charge Coverage	3.42	3.08	3.42	3.23	3.32
Debt Ratio	57.40%	58.26%	59.29%	61.42%	62.86%
Debt/Equity	134.75%	139.59%	145.62%	159.19%	169.27%
Debt to Tangible Net Worth	134.81%	155.72%	163.48%	179.41%	191.93%
Cash Flow/Total Debt	0.00%	0.00%	0.00%	0.00%	0.00%
PROFITABILITY	2019	2018	2017	2016	2015
Net Profit Margin	13.20%	10.45%	10.55%	10.25%	8.42%
Total Asset Turnover	0.23	0.29	0.28	0.27	
Return on Assets	3.48%	3.40%	3.45%	3.18%	
Operating Income Margin	14.49%	13.43%	15.92%	16.68%	14.18%
Operating Asset Turnover	0.28	0.34	0.33	0.31	
Return on Operating Assets	4.08%	4.62%	5.19%	5.14%	
Sales to Fixed Assets	0.35	0.43	0.40	0.38	
Return on Investment	5.14%	5.10%	5.20%	4.95%	
Return on Total Equity	8.26%	8.24%	8.69%	8.36%	
Return on Common Equity	8.26%	8.24%	8.69%	8.36%	
Gross Profit Margin	14.49%	13.43%	15.92%	16.68%	14.18%
INVESTOR ANALYSIS	2019	2018	2017	2016	2015
Degree of Financial Leverage	1.41	1.48	1.41	1.45	1.43

FinSAS Version 2003051213	**Ratios - ending**				
Company:	**Allete Inc.**				
Analyst:	**Alec Tolson**				
Most Recent Year Available:	**2019**				
Years Available for:					
Income Statement (1-5)	5				
Balance Sheet (1-5)	5				
* EOY values instead of averages					
LIQUIDITY	2019	2018	2017	2016	2015
Days' Sales in Receivables	28.63	35.58	35.28	34.22	30.01
* Accounts Receivable Turnover	12.75	10.26	10.34	10.67	12.16
* A/R Turnover in Days	28.63	35.58	35.28	34.22	30.01
Days' Sales in Inventory	25.05	24.39	29.33	34.07	33.50
* Inventory Turnover	14.57	14.96	12.44	10.71	10.89
* Inventory Turnover in Days	25.05	24.39	29.33	34.07	33.50
* Operating Cycle	53.68	59.98	64.61	68.29	63.51
Working Capital	(237,900)	(70,800)	16,300	(105,000)	95,600
Current Ratio	0.53	0.83	1.05	0.74	1.35
Acid Test	0.33	0.53	0.67	0.38	0.79
Cash Ratio	0.14	0.17	0.28	0.07	0.35
* Sales to Working Capital	-5.21	-21.17	87.07	-12.76	15.55
Cash Flow/Cur. Mat. of Debt & NP	-	-	-	-	-
LONG-TERM DEBT-PAYING ABILITY	2019	2018	2017	2016	2015
Times Interest Earned	3.42	3.08	3.42	3.23	3.32
Fixed Charge Coverage	3.42	3.08	3.42	3.23	3.32
Debt Ratio	57.40%	58.26%	59.29%	61.42%	62.86%
Debt/Equity	134.75%	139.59%	145.62%	159.19%	169.27%
Debt to Tangible Net Worth	134.81%	155.72%	163.48%	179.41%	191.93%
Cash Flow/Total Debt	0.00%	0.00%	0.00%	0.00%	0.00%
PROFITABILITY	2019	2018	2017	2016	2015
Net Profit Margin	13.20%	10.45%	10.55%	10.25%	8.42%
* Total Asset Turnover	0.23	0.29	0.28	0.27	0.30
* Return on Assets	3.38%	3.37%	3.39%	3.18%	2.88%
Operating Income Margin	14.49%	13.43%	15.92%	16.68%	14.18%
* Operating Asset Turnover	0.28	0.35	0.32	0.31	0.34
* Return on Operating Assets	3.99%	4.67%	5.13%	5.19%	4.81%
* Sales to Fixed Assets	0.34	0.43	0.40	0.38	0.42
* Return on Investment	5.03%	5.08%	5.08%	5.02%	4.46%
* Return on Total Equity	7.95%	8.08%	8.33%	8.20%	7.74%
* Return on Common Equity	7.95%	8.08%	8.33%	8.20%	7.74%
Gross Profit Margin	14.49%	13.43%	15.92%	16.68%	14.18%
INVESTOR ANALYSIS	2019	2018	2017	2016	2015
Degree of Financial Leverage	1.41	1.48	1.41	1.45	1.43

OTHER FINANCIAL RATIO CALCULATIONS

ALLETE:

Accounts payable turnover:

supply purchases / (beginning ap + end ap)/2

= (fuel purchased power and gas + transmission services + cost of sales + operating and maintenance) / (average AP)

2019	2018	2017
5.114	7.242	9.127

Days payable outstanding:

AP * 365 / COGS

2019	2018	2017
56.8	42.1	41.7

Asset turnover ratio

Sales / average assets

Total Operating Revenue / Average Total Assets

2019	2018	2017
0.233	0.293	0.240

Earnings Per Share (basic)

2019	2018	2017
$3.59	$3.39	$3.39

(ALLETE, Inc. Annual Report for 2019, 68)

Avista:

Accounts payable turnover:

supply purchases / (beginning ap + end ap)/2

(Resource costs + Other Operating Expenses) / (average AP)

2019	2018	2017
7.18	7.54	7.49

Days payable outstanding:

AP * 365 / COGS

2019	2018	2017
35.4	34.8	33.9

Asset turnover ratio

Sales / average assets

Total Operating Revenue / Average Total Assets

2019	2018	2017
0.227	0.247	0.267

Earnings Per Share (basic)

2019	2018	2017
$2.98	$2.08	$1.80

(Avista Corporation 2019 Annual Report, 76)

APPENDIX B: VALUATION ASSUMPTIONS, SPREADSHEETS, AND CALCULATIONS

ALLETE Valuation Excel Document. If you want access to this excel file, contact author.

ALLETE INC.					
ANNUAL FINANCIAL INFORMATION					
BALANCE SHEET					
ANNUAL ASSETS (000s)					
FISCAL YEAR ENDING	**12/31/2019**	**12/31/2018**	**12/31/2017**	**12/31/2016**	**12/31/2015**
CASH	69,300	69,100	98,900	27,500	97,000
MRKTABLE SECURITIES	-	-	-	-	-
RECEIVABLES	96,400	144,400	135,100	122,500	121,200
INVENTORIES	72,800	86,700	95,900	104,200	117,100
RAW MATERIALS		-	-	-	-
WORK IN PROGRESS		-	-	-	-
FINISHED GOODS		-	-	-	-
NOTES RECEIVABLE		-	-	-	-
OTHER CURRENT ASSETS	31,000	34,100	37,600	40,300	35,700
TOTAL CURRENT ASSETS	269,500	334,300	367,500	294,500	371,000
PROP, PLANT & EQUIP	6,212,400	5,645,600	5,507,200	5,296,600	5,094,900
ACCUMULATED DEP	1,835,400	1,741,200	1,684,800	1,555,400	1,425,800
NET PROP & EQUIP	4,377,000	3,904,400	3,822,400	3,741,200	3,669,100
INVEST & ADV TO SUBS	219,500	210,200	171,800	191,200	199,100
OTHER NON-CUR ASSETS	20,400	-	8,600	8,600	-
DEFERRED CHARGES	-	-	-	-	-
INTANGIBLES	1,000	223,300	225,900	213,400	215,200
DEPOSITS & OTH ASSET	595,400	492,800	483,800	457,500	452,700
TOTAL ASSETS	5,482,800	5,165,000	5,080,000	4,906,400	4,907,100
ANNUAL LIABILITIES (000S)					
FISCAL YEAR ENDING	**12/31/2019**	**12/31/2018**	**12/31/2017**	**12/31/2016**	**12/31/2015**
NOTES PAYABLE	-	-	-	-	1,600
ACCOUNTS PAYABLE	234,100	219,100	203,900	138,100	151,400
CUR LONG TERM DEBT	212,900	57,500	64,100	187,700	36,300
CUR PORT CAP LEASES	-	-	-	-	-
ACCRUED EXPENSES	-	-	-	-	-
INCOME TAXES	-	-	-	-	-
OTHER CURRENT LIAB	60,400	128,500	83,200	73,700	86,100
TOTAL CURRENT LIAB	507,400	405,100	351,200	399,500	275,400
MORTGAGES		-	-	-	-
DEFERRED CHARGES/INC	945,900	913,000	954,300	920,800	891,600
CONVERTIBLE DEBT		-	-	-	-
LONG TERM DEBT	1,400,900	1,428,500	1,439,200	1,370,400	1,568,700
NON-CUR CAP LEASES		-	-	-	-
OTHER LONG TERM LIAB	293,000	262,600	267,100	322,700	349,000
TOTAL LIABILITIES	3,147,200	3,009,200	3,011,800	3,013,400	3,084,700
MINORITY INT (LIAB)		-	-	-	-
PREFERRED STOCK		-	-	-	-
COMMON STOCK NET	1,436,700	1,428,500	1,401,400	1,295,300	1,271,400
CAPITAL SURPLUS	-	-	-	-	-
RETAINED EARNINGS	818,800	754,600	689,400	625,900	573,300
TREASURY STOCK	-	-	-	-	-
OTHER EQUITIES	80,100	(27,300)	(22,600)	(28,200)	(22,300)
SHAREHOLDER EQUITY	2,335,600	2,155,800	2,068,200	1,893,000	1,822,400
TOT LIAB & NET WORTH	5,482,800	5,165,000	5,080,000	4,906,400	4,907,100
ANNUAL INCOME (000s)					
FISCAL YEAR ENDING	**12/31/2019**	**12/31/2018**	**12/31/2017**	**12/31/2016**	**12/31/2015**
NET SALES	1,240,500	1,498,600	1,419,300	1,339,700	1,486,400
COST OF GOODS	1,060,700	1,297,400	1,193,400	1,116,200	1,275,700
GROSS PROFIT	179,800	201,200	225,900	223,500	210,700
R & D EXPENDITURES		-	-	-	-
SELL GEN & ADMIN EXP	-	-	-	-	-
INC BEF DEP & AMORT	179,800	201,200	225,900	223,500	210,700
DEPRECIATION & AMORT	-	-	-	-	-
NON-OPERATING INC	-	-	-	-	-
INTEREST EXPENSE	64,900	67,900	67,800	70,300	64,900
INCOME BEFORE TAX	178,900	158,600	186,900	175,600	166,800
PROV FOR INC TAXES	(6,600)	(15,500)	14,700	19,800	25,300
MINORITY INT (INC)	(100)	-	-	500	400
INVEST GAINS/LOSSES	-	-	-	-	-
OTHER INCOME	64,000	25,300	28,800	22,400	21,000
NET INC BEF EX ITEMS	185,600	174,100	172,200	155,300	141,100
EX ITEMS & DISC OPS	-	-	-	-	-
NET INCOME	185,600	174,100	172,200	155,300	141,100
OUTSTANDING SHARES	51,700	51,500	51,100	49,600	49,100
CASH FLOW PROVIDED BY OPERATING ACTIVITY (000s)					
Fiscal Year Ending	**12/31/2019**	**12/31/2018**	**12/31/2017**	**12/31/2016**	**12/31/2015**
Net Income (Loss)	185,500	174,100	172,200	155,800	141,500
Depreciation/Amortization	202,000	186,900	158,500	178,600	148,300
Net Incr (Decr) Assets/Liabs	(55,100)	48,900	(6,800)	(8,600)	(34,400)
Cash Prov (Used) by Disc Oper	(23,600)	-	-	-	-
Other Adjustments, Net	(59,300)	23,200	79,000	9,100	84,700
Net Cash Prov (Used) by Oper	249,500	433,100	402,900	334,900	340,100
CASH FLOW PROVIDED BY INVESTING ACTIVITY (000s)					
Fiscal Year Ending	**12/31/2019**	**12/31/2018**	**12/31/2017**	**12/31/2016**	**12/31/2015**
(Incr) Decr in Prop, Plant	(597,100)	(312,400)	(208,500)	(265,600)	(286,800)
(Acq) Disp of Subs, Business	268,600	-	(18,500)	(5,800)	(333,300)
(Incr) Decr in Securities Inv	(100)	(3,100)	1,500	(400)	(600)
Other Cash Inflow (Outflow)	(16,700)	(33,500)	(3,500)	(300)	1,900
Net Cash Prov (Used) by Inv	(345,300)	(349,000)	(229,000)	(272,100)	(618,800)
CASH FLOW PROVIDED BY FINANCING ACTIVITY (000s)					
Fiscal Year Ending	**12/31/2019**	**12/31/2018**	**12/31/2017**	**12/31/2016**	**12/31/2015**
Issue (Purchase) of Equity	1,900	20,300	86,000	30,900	161,200
Issue (Repayment) of Debt	201,900	75,600	131,500	4,800	324,500
Incr (Decr) In Borrowing	(72,200)	(95,500)	(189,600)	(57,700)	(160,200)
Dividends, Other Distribution	(121,400)	(115,000)	(108,700)	(102,700)	(97,900)
Other Cash Inflow (Outflow)	99,100	(600)	(21,300)	(10,500)	2,300
Net Cash Prov (Used) by Finan	109,300	(115,200)	(102,100)	(135,200)	229,900
Effect of Exchg Rate On Cash	-	-	-	-	-
Net Change in Cash or Equiv	13,500	(31,100)	71,800	(72,400)	(48,800)
Cash or Equiv at Year Start	79,000	110,100	38,300	110,700	145,800
Cash or Equiv at Year End	92,500	79,000	110,100	38,300	97,000

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Comprehensive Statements

For all yellow cells, fill in links to the Actual Worksheet or other inputs.

ALLETE INC.	12/31/2019	12/31/2018	12/31/2017	12/31/2016	12/31/2015
Income Statement					
Total net revenues	1,240,500.0	1,498,600.0	1,419,300.0	1,339,700.0	1,486,400.0
Cost of goods sold expense	1,060,700.0	1,297,400.0	1,193,400.0	1,116,200.0	1,275,700.0
Cost of services or operations expense					
Depreciation expense (for tangible assets, if reported separately)					
Amortization expense (for goodwill and Intangible, if reported separately)					
Depreciation and amortization expense (if reported combined)	-	-	-	-	-
Research & development expense	-	-	-	-	-
Sales & marketing expenses (if not included in SGA)					
General & administrative expenses (if not included in SGA)					
Selling, gen. & admin. expense [if reported as a single item]	-	-	-	-	-
Minority interest expense (if shown as pre-tax operating expense)					
Merger and restructuring costs					
Asset impairment losses or write-downs					
Extraordinary charges or expenses (if shown on pre-tax basis)					
Extraordinary credit or income (if shown on a pre-tax basis)					
Other operating expenses (Income)					
Interest expense (Income)	64,900.0	67,900.0	67,800.0	70,300.0	64,900.0
Interest capitalized					
Interest income					
Reserve expense (income) (increase in reserves is expense, decrease is income)					
Investment income (Expense) (if shown on pre-tax basis)					
Gain (loss) on sale of assets or discontinued operation (if shown on pre-tax basis)					
Remitted income (Expense) or equity earnings (Losses) in affiliates					
Unremitted income (Expense) or equity earnings (Losses) in affiliates					
Minority interest expense (if shown as pre-tax nonoperating expense)					
Losses on equity investees and other (if shown on pre-tax basis)					
Other nonoperating income (Expense) (if shown on pre-tax basis)	-	-	-	-	-
Special nonrecurring items income (Expense) (if shown on pre-tax basis)					
Provision for income tax expense (Rebate)	(6,600.0)	(15,500.0)	14,700.0	19,800.0	25,300.0
Minority interest expense (if shown on after-tax basis)	(100.0)	-	-	500.0	400.0
Equity in earnings expense (if shown on after-tax basis)					
Extraordinary items (if shown on after-tax basis)					
Discontinued operations (if shown on after-tax basis)					
Extraordinary items and discontinued operations (if shown on after-tax basis)	-	-	-	-	-
Investment gains (Losses) (if shown on after-tax basis)	-	-	-	-	-
All other income (Losses) (if shown on after-tax basis)	64,000.0	25,300.0	28,800.0	22,400.0	21,000.0
Cumulative effect of accounting changes					
Net income from Actual Sheet	185,600.0	174,100.0	172,200.0	155,300.0	141,100.0
Calculated net income from Comprehensive Sheet	185,600.0	174,100.0	172,200.0	155,300.0	141,100.0
Check to see if calculated net income is consistent with Actual sheet	OK	OK	OK	OK	OK
Balance Sheet					
Assets					
Cash and equivalents	69,300.0	69,100.0	98,900.0	27,500.0	97,000.0
Marketable securities	-	-	-	-	-
Notes receivable	-	-	-	-	-
Short-term investments or investment securities					
Accounts receivable	96,400.0	144,400.0	135,100.0	122,500.0	121,200.0
Tax refund receivable					
Progress payments					
Prepaid expenses					
Current deferred tax asset					
Inventories	72,800.0	86,700.0	95,900.0	104,200.0	117,100.0
Other nonoperating current assets					
Other operating current assets	31,000.0	34,100.0	37,600.0	40,300.0	35,700.0
Total current assets	269,500	334,300	367,500	294,500	371,000
Long-term receivables					
Investments in unconsolidated subsidiaries					
Other investments					
Net property, plant, & equip (PPE)	4,377,000.0	3,904,400.0	3,822,400.0	3,741,200.0	3,669,100.0
Goodwill (if shown separately)					
Intangibles (if shown separately)	1,000.0	223,300.0	225,900.0	213,400.0	215,200.0
Cost in excess of fair value of net assets acquired also called goodwill)					
Goodwill and intangibles (if shown combined)					
Deferred tax asset (Long-term)					
Long-term notes receivable					
Other operating long-term assets	20,400.0	-	8,600.0	8,600.0	-
Deferred charges	-	-	-	-	-
Deposits	595,400.0	492,800.0	483,800.0	457,500.0	452,700.0
Investments & advances to subsidiaries	219,500.0	210,200.0	171,800.0	191,200.0	199,100.0
Other nonoperating long-term assets					
Total assets from Actual Sheet	5,482,800.0	5,165,000.0	5,080,000.0	4,906,400.0	4,907,100.0
Calculated total assets from Comprehensive Sheet	5,482,800.0	5,165,000.0	5,080,000.0	4,906,400.0	4,907,100.0
Check to see if total assets consistent with Actual sheet	OK	OK	OK	OK	OK
Liabilities and Equity					
Notes payable	-	-	-	-	1,600.0
Current portion of long-term debt	212,900.0	57,500.0	64,100.0	187,700.0	36,300.0
Current portion of capitalized leases	-	-	-	-	-
All other short-term debt					
Accounts payable	234,100.0	219,100.0	203,900.0	138,100.0	151,400.0
Short-term unearned revenue					
Interest payable (or accrued interest)					
Dividends payable					
Short-term deferred taxes					
Taxes payable or accrued taxes	-	-	-	-	-
Accrued wages or salary					
Other accrued expenses or accruals	-	-	-	-	-
Other nonoperating current liabilities					
Other operating current liabilities	60,400.0	128,500.0	83,200.0	73,700.0	86,100.0
Total current liabilities	507,400	405,100	351,200	399,500	275,400
Non-current portion of long-term debt	1,400,900.0	1,428,500.0	1,439,200.0	1,370,400.0	1,568,700.0
Mortgages	-	-	-	-	-
Non-current portion of capitalized leases	-	-	-	-	-
Convertible debt	-	-	-	-	-
Any other long-term debt					
Provision for risks and charges					
Reserve accounts					
Deferred tax liability in untaxed reserves					
Deferred income taxes (Long-term)	945,900.0	913,000.0	954,300.0	920,800.0	891,600.0
Deferred income					
Long-term unearned revenue					
Restructuring obligations					
Commitments and contingencies					
Other long-term liabilities	293,000.0	262,600.0	267,100.0	322,700.0	349,000.0
Retirement, pension, and health insurance related liabilities					
Minority interest	-	-	-	-	-
Nonequity reserves					
Preferred stock	-	-	-	-	-
Common stock (at par)	1,436,700.0	1,428,500.0	1,401,400.0	1,295,300.0	1,271,400.0
Common stock capital suprplus or paid-in-capital	-	-	-	-	-
Revaluation of reserves					
Other appropriated reserves					
Unappropriated (free) reserves					
Retained earnings	818,800.0	754,600.0	689,400.0	625,900.0	573,300.0
Equity in untaxed reserves					
ESOP guarantees					
Treasury stock	-	-	-	-	-
Common stock warrants and stock options					
Other equity	80,100.0	(27,300.0)	(22,600.0)	(28,200.0)	(22,300.0)
Unrealized gain (loss) on marketable securities					
Accumulated other comprehensive income or cumulative other adj.					
Unrealized gain (loss) on foreign exchange					
Cumulative foreign currency translations					
Total shareholder equity from Actual Sheet	2,335,600.0	2,155,800.0	2,068,200.0	1,893,000.0	1,822,400.0
Calculated total shareholder equity from Comprehensive Sheet	2,335,600.0	2,155,800.0	2,068,200.0	1,893,000.0	1,822,400.0
Check to see if shareholder total eq. is consistent with Actual sheets	OK	OK	OK	OK	OK
Total Liabilities and Equity from Actual Sheet	5,482,800.0	5,165,000.0	5,080,000.0	4,906,400.0	4,907,100.0
Calculated Total Liabilities and Equity from Comprehensive Sheet	5,482,800.0	5,165,000.0	5,080,000.0	4,906,400.0	4,907,100.0
Check to see if Total Liab. & Eq. consistent with Comprehensive sheet	OK	OK	OK	OK	OK
Check for balancing of statements	Balances	Balances	Balances	Balances	Balances
Required Items: You must supply these inputs in the yellow cells, unless they are truly zero.					
Required Items from Statement of Cash Flows					
Preferred dividends paid					
Common dividends paid	(121,400.0)	(115,000.0)	(108,700.0)	(102,700.0)	(97,900.0)
Depreciation of PPE and tangible Assets	202,000.0	186,900.0	158,500.0	178,600.0	148,300.0
Amortization of goodwill and intangibles					
Required Items from Footnotes or Annual Report					
Number of shares outstanding	51,700.0	51,500.0	51,100.0	49,600.0	49,100.0
Required Items from Financial Statements or User's Judgment					
Assumed marginal tax rate	-5.7%	-11.6%	9.3%	12.9%	17.4%
Optional Items for Special Accounting Adjustments: If you choose to make any of the special accounting adjustments described in the Chapter 10 Appendix, then you must supply these inputs in the yellow cells; otherwise, just leave them as the default values already here.					
LIFO reserve (from Footnotes of Annual Report)	-	-	-	-	-
Interest rate on pension liabilities	0%	0%	0%	0%	0%
Interest rate on operating leases	0%	0%	0%	0%	0%
Capitalized value of operating leases	-	-	-	-	-
Stock options (Warrants)	-	-	-	-	-
Capitalized operating costs	-	-	-	-	-
Special goodwill impairment or accounting change	-	-	-	-	-
Statement of Cash Flows (Calculated from the Income Sheet and Balance Sheets shown above.					
Operating Activities					
Net income	185,600.0	174,100.0	172,200.0	155,300.0	141,100.0
Adjustments for reconciliation of RE account	-	6,100	-	-	(3,899,900)
Depreciation and amortization	202,000.0	186,900.0	158,500.0	178,600.0	148,300.0
Change in deferred tax	32,900	(41,300)	33,500	29,200	813,600
Change in operating current assets	65,000.0	3,400.0	(1,600.0)	7,000.0	4,012,000.0
Change in operating current liabilities	(53,100)	60,500	75,300	(25,700)	(2,210,500)
Net cash from operating activities	432,400	389,700	437,900	344,400	(995,400)
Investing Activities					
Investment in PPE	(674,600)	(268,900)	(239,700)	(250,700)	2,691,600
Investment in other long-term oper. ass.	201,900	11,200	(12,500)	(6,800)	(48,200)
Net cash from investing activities	(472,700)	(257,700)	(252,200)	(257,500)	2,643,400
Financing Activities					
Changes in short-term investments	-	-	-	-	2,000
Changes in long-term investments	(111,900)	(47,400)	(6,900)	3,100	(558,800)
Changes in all short-term debt	155,400	(6,600)	(123,600)	149,800	29,900
Changes in all long-term debt	(27,600)	(10,700)	68,800	(198,300)	265,700
Changes in all other long-term liabilities	30,400	(4,500)	(55,600)	(26,300)	55,000
Change in preferred stock	-	-	-	-	-
Change in Par + PIC	8,200	27,100	106,100	23,900	(1,427,600)
Change in common stock warrants and stock options	-	-	-	-	-
Change in treasury and cumulative adjustments	107,400	(4,700)	5,600	(5,900)	8,700
Preferred dividends	-	-	-	-	-
Common dividends	(121,400)	(115,000)	(108,700)	(102,700)	(97,900)
Net cash from financing activities	40,500	(161,800)	(114,300)	(156,400)	(1,723,000)
Net cash flow	200	(29,800)	71,400	(69,500)	(75,000)
Starting cash from balance sheet	69,100	98,900	27,500	97,000	172,000
Ending cash	69,300	69,100	98,900	27,500	97,000
Check to see if ending cash is consistent with balance sheet	OK	OK	OK	OK	OK

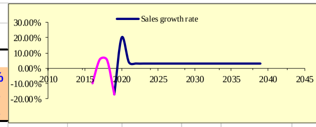
B3

Inputs for Projections and Valuation

Enter inputs in yellow cells.

Key Output of Valuation:

Projected ROIC at horizon	=	8.6%
Estimated price for 12/31/2019	=	$ 72.48
Estimated price for 12/31/2019	=	$ 72.48



Inputs

Number of years historical data analyzed: 5

Historical Values for Ratios Used to Project Financial Statements	Average	Trend	Most Recent	Starting rate	Long Term rate	Time until long term (years)	Fade Rate	graph
Ratios to calculate operating profit								
Sales growth rate	-1.9%	-25.1%	-17.2%	20.0%	3.0%	6	3.00	Sales g
COGS / Sales	71.6%	71.3%	69.2%	69.2%	67.0%	10	0.00	CGS
SGA / Sales	0.0%	0.0%	0.0%	0.0%	21.0800%	10	0.10	SGA
Depreciation / Net PPE	4.6%	4.6%	4.6%	4.6%	4.6%	10	0.10	Depr
Ratios to calculate operating capital								
Cash / Sales	4.8%	6.9%	5.6%	1.0%	0.5%	10	0.10	Cash
Inventory/ Sales	6.5%	4.9%	5.9%	5.9%	14.0%	10	0.10	Invty
Accts. rec. / Sales	9.0%	8.0%	7.8%	7.8%	7.8%	10	0.10	AcctRec
Other short term operating assets/Sales	2.6%	2.5%	2.5%	2.5%	2.5%	10	0.10	Othr STA
Net PPE / Sales	290.5%	343.5%	352.8%	352.8%	29.0%	10	0.10	Net PPE
Other long-term op. A. / Sales	49.7%	48.3%	49.7%	49.7%	49.7%	10	0.10	Othr LTA
Accts. pay./ Sales	14.5%	21.0%	18.9%	18.9%	18.9%	10	0.10	Acct Pay
Accruals / Sales	0.0%	0.0%	0.0%	0.0%	0.0%	10	0.10	Accruals
Other current liabilities / Sales	6.2%	6.4%	4.9%	4.9%	4.9%	10	0.10	Othr CL
Ratios to calculate operating taxes								
Deferred taxes/Net PPE	23.6%	21.0%	21.6%	21.6%	21.6%	10	0.10	Def Tax
Average tax rate (Taxes/EBT)	1.2%	-18.0%	-5.7%	38.6%	38.6%	10	0.10	Avg Tax
Marginal tax rate	1.2%	-18.0%	-5.7%	38.6%	38.6%	10	0.10	Marg Tax
Dividend and debt ratios								
Dividend policy: growth rate	5.7%	5.5%	5.6%	24.00%	3.00%	20	-0.30	Div g
Long-term debt / market value of firm	#N/A	#N/A	24.06%	1.9355%	24.06%	15	0.10	LTD/MV
Preferred stock / market value of firm	#N/A	#N/A	#N/A	0.00%	0.00%	1	0.00	PFS/MV
Coupon rate on preferred stock	#N/A	#N/A	#N/A	0.00%	0.00%	1	0.00	PFS Cpn
Permanent component of short-term debt / m	#N/A	#N/A	#N/A	3.66%	3.66%	1	0.00	Perm STD
Ratios to calculate rest of income statement and balance sheet								
Nonop. inc. / Sales	2.63%	4.70%	4.89%	4.89%	4.89%	10	0.10	N-OP Inc
Extr. inc. / Sales	0.00%	0.00%	0.00%	0.00%	0.00%	10	0.10	Ex Inc
Long-term investments / Sales	14.52%	17.57%	17.69%	17.69%	17.69%	10	0.10	LT Inv
Other long-term liab. / Sales	21.01%	20.34%	23.62%	23.62%	23.62%	10	0.10	Othr LT L
Interest rates								
Interest rate on cash				0.00%	0.00%	10	0.10	Cash Int
Interest rate on short-term invest.				1.30%	5.00%	10	0.10	STinv Int
Interest rate on all current debt				4.25%	4.25%	10	0.10	Cur D Int
Interest rate on long-term debt				5.375%	4.80%	3	-1.00	LT D Int
Cost of Capital and L-T ROIC								
Weighted Average Cost of Capital (WACC)			4.22%					
Long-term return on invested capital			4.22%					
Target valuation date	12/31/2019							

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Sales growth rate	20.0%	3.8%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
COGS / Sales	69.2%	69.0%	68.8%	68.6%	68.3%	68.1%	67.9%	67.7%	67.4%	67.2%
SGA / Sales	0.0%	3.2%	6.0%	8.6%	11.0%	13.1%	15.0%	16.8%	18.4%	19.8%
Depreciation / Net PPE	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
Cash / Sales	1.0%	0.9%	0.9%	0.8%	0.7%	0.7%	0.6%	0.6%	0.6%	0.5%
Inventory/ Sales	5.9%	7.1%	8.2%	9.2%	10.1%	10.9%	11.7%	12.3%	13.0%	13.5%
Accts. rec. / Sales	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%
Other short term operating assets/Sales	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Net PPE / Sales	352.8%	304.1%	260.0%	220.1%	183.9%	151.3%	121.7%	94.9%	70.7%	48.8%
Other long-term op. A. / Sales	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%
Accts. pay./ Sales	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Accruals / Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other current liabilities / Sales	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
Deferred taxes/Net PPE	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%
Average tax rate (Taxes/EBT)	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%
Marginal tax rate	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%
Dividend policy: growth rate	24.0%	24.0%	24.0%	23.9%	23.9%	23.8%	23.7%	23.6%	23.5%	23.3%
Long-term debt / market value of firm	1.9%	4.6%	7.1%	9.3%	11.3%	13.1%	14.8%	16.3%	17.6%	18.8%
Preferred stock / market value of firm	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Coupon rate on preferred stock	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Permanent component of short-term debt / m	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Nonop. inc. / Sales	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%
Extr. inc. / Sales	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Long-term investments / Sales	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%
Other long-term liab. / Sales	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%
Interest rate on cash	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interest rate on short-term invest.	1.30%	1.86%	2.36%	2.82%	3.23%	3.60%	3.94%	4.25%	4.52%	4.77%
Interest rate on all current debt	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Interest rate on long-term debt	5.38%	5.32%	5.18%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Sales growth rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
COGS / Sales	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%
SGA / Sales	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%
Depreciation / Net PPE	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
Cash / Sales	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Inventory/ Sales	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%
Accts. rec. / Sales	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%
Other short term operating assets/Sales	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Net PPE / Sales	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%
Other long-term op. A. / Sales	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%	49.7%
Accts. pay./ Sales	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Accruals / Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other current liabilities / Sales	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
Deferred taxes/Net PPE	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%
Average tax rate (Taxes/EBT)	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%
Marginal tax rate	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%	38.6%
Dividend policy: growth rate	23.0%	22.6%	22.1%	21.5%	20.6%	19.4%	17.7%	15.5%	12.5%	8.5%
Long-term debt / market value of firm	19.9%	20.9%	21.8%	22.7%	23.4%	24.1%	24.1%	24.1%	24.1%	24.1%
Preferred stock / market value of firm	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Coupon rate on preferred stock	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Permanent component of short-term debt / m	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Nonop. inc. / Sales	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%
Extr. inc. / Sales	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Long-term investments / Sales	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%	17.69%
Other long-term liab. / Sales	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%	23.62%
Interest rate on cash	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interest rate on short-term invest.	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Interest rate on all current debt	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Interest rate on long-term debt	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%

Cost of Capital

Enter inputs in yellow cells.

Key Output of Valuation:

Inputs to Estimate WACC	Input
Enter Current Market Value for Equity	
Current stock price	$81.39
Number of shares common stock outstanding	51,700
Market value of common stock	$4,207,863
Enter Current Market Value for Long-Term Debt	
Estimated value of long-term debt	$1,400,900
Enter Current Market Value for Short-Term Debt	
Estimated value of short-term debt	$212,900
Enter Current Market Value for Preferred Stock	
Estimated value of lpreferred stock	$0
Estimate Percent of Firm that will be Financed by Long-term I	
Current percent of firm financed with long-term debt	24.06%
Target percent financed with long-term debt=	24.06%
Estimate Percent of Firm that will be Financed by Preferred Stock	
Current percent of firm financed with preferred stock	0.00%
Target percent financed with preferred stock =	0.00%
Estimate Percent of Firm that will be Financed by Short-term Debt	
Current percent of firm financed with short-term debt	3.66%
Target percent financed with short-term debt =	3.66%
Estimate Cost of Equity	S&P500
Beta=	0.323
Risk-free rate=	2.25%
Market risk premium =	5.75%
Cost of equity=	**4.11%**
Estimate Cost of Long-term Debt	
Bond rating for company's debt	BBB+
Spread for bond rating	2.55%
Tax rate=	4.4%
Cost of long-term debt=	4.80%
After-tax cost of long-term debt=	4.59%
Inputs to Estimate Cost of Preferred Stock	
Yield on preferred stock	0.00%
Current coupon rate (preferred dividend/preferred stock)	0.00%
Cost of preferred stock =	0.00%
Inputs to Estimate Cost of Short-term Debt	
Prime rate	4.25%
Adjustment to prime	0.00%
Cost of short-term debt	4.25%
After-tax cost of short-term debt	4.06%
Estimated WACC	**4.22%**

Projections and Valuation

Estimated price for most recent fiscal year	12/31/2019	=	$ 72.48
Estimated price for target date	12/31/2019	=	$ 72.48

	Most Recent 12/31/19	Projected 12/31/20
Income Statement ($ Thousands)		
Sales	$ 1,240,500	$ 1,488,600
Costs of goods sold (COGS)	858,700	1,030,440
Sales, general and administrative expense (SGA)	0	0
Depreciation	202,000	242,400
Operating profit	$ 179,800	$ 215,760
Interest expense	64,900	84,347
Interest income	0	0
Nonoperating income (Expense)	60,618	72,742
Earnings before taxes (EBT)	$ 175,518	$ 204,155
Tax expense	(10,082)	78,804
Net income before extraordinary items	$ 185,600	$ 125,351
After-tax extraordinary income (Expense)	0	0
Net income (NI)	$ 185,600	$ 125,351
Dividends-- preferred	$ 0	$ 0
Dividends-- common	$ 121,400	$ 150,536
Additions to RE	$ 64,200	$ (25,185)

Balance Sheets ($ Thousands)	12/31/19	12/31/20
Assets		
Cash	$ 69,300	$ 14,886
Inventory	72,800	87,360
Accounts receivable	96,400	115,680
Other short-term operating assets	31,000	37,200
Short-term investments	0	0
Total current assets	$ 269,500	$ 255,126
Net plant, property, & equipment (PPE)	4,377,000	5,252,400
Other long-term operating assets	616,800	740,160
Long-term investments	219,500	263,400
Total Assets	$ 5,482,800	$ 6,511,086
Liabilities and Equity		
Accounts payable (AP)	$ 234,100	$ 280,920
Accruals	0	0
Other operating current liabilities	60,400	72,480
All short-term debt	212,900	2,239,030
Total current liabilities	$ 507,400	$ 2,592,430
Long-term debt	1,400,900	121,560
Deferred taxes	945,900	1,135,080
Preferred stock	0	0
Other long-term liabilities	293,000	351,600
Total liabilities	$ 3,147,200	$ 4,200,671
Par plus PIC Less treasury (and other adjustments)	(2,375,284)	(2,375,284)
Retained earnings (RE)	4,710,884	4,685,699
Total common equity	$ 2,335,600	$ 2,310,415
Total liabilities and equity	$ 5,482,800	$ 6,511,086

Info for making the sheets balance

Specified assets		6,511,086
Specified liabilities		4,501,740
Net required financing		2,009,346
Current debt		2,009,346
Short-term investments		0
Balance check: TA-TL		**Balance**

Valuation

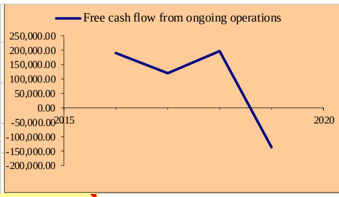
Calculating Projected FCF		
Marginal tax rate	-5.7%	38.6%
Reported income tax expense	(10,082)	78,804
Taxes reported but not paid	32,900	189,180
Actual taxes paid	(42,982)	(110,376)
Plus tax saved due to net interest expenses	(3,728)	32,558
Minus tax paid on non-operating income	(3,482)	28,078
Tax on operating income	(43,228)	(105,897)
Net operating profit after taxes (NOPAT)	223,028	321,657
NOPAT adjusted for extraordinary income	223,028	321,657
Operating current assets	269,500	255,126
Operating current liabilities	294,500	353,400
Net operating working capital	(25,000)	(98,274)
Operating long term capital	4,993,800	5,992,560
Operating capital (adjusted for any special asset impairment of a	4,968,800	5,894,286
Investment in operating capital	361,600	925,486
Free cash flow (including extraordinary income)	(138,572)	(603,829)
Calculating Projected ROIC		
ROIC (NOPAT/ Beginning capital)	4.8%	6.5%
Projected Growth Rates		
Growth in Sales		20.0%
Growth in NOPAT		44.2%
Growth in operating capital		18.6%
Growth in FCF		335.8%
Calculating Value		
WACC	4.22%	4.22%
Assumed long-term return on invested capital		
Horizon value		
Value of operations	5,323,554	6,152,117
Value of operations adjusted for half-year convention	5,434,759	6,280,631
Value of investments	219,500	263,400
Total value of firm	5,654,259	6,544,031
Value of all debt, preferred stock, and other nonoperating liabilities	1,906,800	2,712,191
Value of equity	3,747,459	3,831,840
Number of shares	51,700	51,700
Estimated price per share, end of fiscal year	$ 72.48	$ 74.12

ALLETE INC.

Analysis of Historical Financial Statements

Enter inputs in yellow cells for comparative analysis.

Click "buttons" in column B to change graph.



Number of years of historical data you want to analyze (3 to 10 years). **4 years of data to analyze**

		12/31/19	12/31/18	12/31/17	12/31/16	12/31/15
		2019	2018	2017	2016	2015
Historical Free Cash Flow (FCF)						
Assumed marginal tax rate		-6%	-12%	9%	13%	17%
Reported income tax expense		(10,082)	(18,135)	17,652	23,051	29,625
Taxes reported but not paid		32,900	(41,300)	33,500	29,200	813,600
Actual taxes paid		(42,982)	23,165	(15,848)	(6,149)	(783,975)
Plus tax saved due to net interest expenses		(3,728)	(7,895)	6,304	9,086	11,262
Minus tax paid on non-operating income		(3,482)	(2,635)	2,952	3,251	4,325
Tax on operating income		(43,228)	17,905	(12,496)	(314)	(777,038)
Net operating profit after taxes (NOPAT)		223,028	183,295	238,396	223,814	987,738
NOPAT/Sales	NOPAT/Sales	18.0%	12.2%	16.8%	16.7%	66.5%
NOPAT adjusted for extraordinary income		223,028	183,295	238,396	223,814	987,738
Operating current assets		269,500	334,300	367,500	294,500	371,000
Operating current liabilities		294,500	347,600	287,100	211,800	237,500
Net operating working capital		(25,000)	(13,300)	80,400	82,700	133,500
Operating long term capital		4,993,800	4,620,500	4,540,700	4,420,700	4,337,000
Operating capital (adjusted for any special asset impairment of accounting changes)		4,968,800	4,607,200	4,621,100	4,503,400	4,470,500
Operating capital/Sales	Op. Capital/Sales	400.5%	307.4%	325.6%	336.1%	300.8%
Investment in operating capital		361,600	(13,900)	117,700	32,900	(4,293,500)
Free cash flow from ongoing operations	FCF	(138,572)	197,195	120,696	190,914	5,281,238
Free cash flow (including extraordinary income)		$ (138,572)	$ 197,195	$ 120,696	$ 190,914	$ 5,281,238
Historical Return on Invested Capital						
ROIC (NOPAT/ Beginning capital)	ROIC	**4.8%**	**4.0%**	**5.3%**	**5.0%**	**11.3%**
Historical Economic Profit						
Historical weighted average costs of capital		4.2%	4.2%	4.2%	4.2%	4.2%
Economic profit	Econ. Prof.	**$ 28,535**	**$ (11,785)**	**$ 48,285**	**$ 35,092**	**$ 617,765**

Traditional Ratio Analysis: Fill in yellow cells with ratios for industry or for closest competitor for most recent year.	**Graph**	**Most Recent Industry or Competitor**	**Company's Historical Average**	**Trend**	**Most Recent**				
Payout ratio	Payout Ratio	**85.26%**	**65.2%**	**65.4%**	**65.4%**	66.1%	63.1%	66.1%	69.4%
Annual sales growth rate	Sales g	**-3.80%**	**-1.9%**	**-25.1%**	**-17.2%**	5.6%	5.9%	-9.9%	-93.8%
Quick ratio	Quick Ratio	**0.45**	**0.56**	**0.46**	**0.39**	0.61	0.77	0.48	0.92
Current ratio	Current Ratio	**0.57**	**0.78**	**0.58**	**0.53**	0.83	1.05	0.74	1.35
LT debt to equity	L-TD/E	**0.95**	**0.67**	**0.57**	**0.60**	0.66	0.70	0.72	0.86
Total debt to equity	Tot D/E	**2.14**	**0.73**	**0.62**	**0.69**	0.69	0.73	0.82	0.88
Interest coverage (Times-interest-earned)	Int. Cov.	**3.19**	**3.06**	**2.66**	**2.77**	2.96	3.33	3.18	3.25
Gross margin	Gross Margin	**15.64%**	**28.4%**	**28.7%**	**30.8%**	25.9%	27.1%	30.0%	24.2%
EBITD margin	EBITD Margin		**28.4%**	**28.7%**	**30.8%**	25.9%	27.1%	30.0%	24.2%
Operating margin	Op. Margin	**15.64%**	**15.1%**	**12.9%**	**14.5%**	13.4%	15.9%	16.7%	14.2%
Pre-tax margin	Pre-Tax Mgn.		**12.8%**	**12.7%**	**14.1%**	10.4%	13.4%	13.3%	11.5%
Net profit margin	Net Profit Mgn.	**14.62%**	**12.6%**	**15.0%**	**15.0%**	11.6%	12.1%	11.6%	9.5%
Return on assets	ROA	**3.23%**	**3.3%**	**3.5%**	**3.4%**	3.4%	3.4%	3.2%	2.9%
Receivable turnover	Rec. TO	**7.96**	**11.17**	**12.59**	**12.87**	10.38	10.51	10.94	12.26
Inventory turnover	Inv. TO	**17.05**	**11.10**	**13.70**	**11.80**	12.81	10.79	9.00	9.63
Asset turnover	Asset TO	**0.22**	**0.27**	**0.23**	**0.23**	0.29	0.28	0.27	0.30

Historical Values for Ratios Used to Project Financial Statements		**Most Recent Industry or Competitor**	**Average**	**Trend**	**Most Recent**				
Ratios to calculate operating profit									
Sales growth rate	Sales g	**-3.8%**	**-1.9%**	**-25.1%**	**-17.2%**	5.6%	5.9%	-9.9%	-93.8%
COGS / Sales	CGS %	**#N/A**	**71.6%**	**71.3%**	**69.2%**	74.1%	72.9%	70.0%	75.8%
SGA / Sales	SGA %	**#N/A**	**0.0%**	**0.0%**	**0.0%**	0.0%	0.0%	0.0%	0.0%
Depreciation / Net PPE	Depr % PPE	**#N/A**	**4.6%**	**4.6%**	**4.6%**	4.8%	4.1%	4.8%	4.0%
Ratios to calculate operating capital		**Competitor**	**Average**	**Trend**	**Most Recent**				
Cash / Sales	Cash %	**#N/A**	**4.8%**	**6.9%**	**5.6%**	4.6%	7.0%	2.1%	6.5%
Inventory/ Sales	Inv. %	**5.9%**	**6.5%**	**4.9%**	**5.9%**	5.8%	6.8%	7.8%	7.9%
Accts. rec. / Sales	Acct. Rec. %	**12.6%**	**9.0%**	**8.0%**	**7.8%**	9.6%	9.5%	9.1%	8.2%
Other short term operating assets/Sales	Oth. ST OA %	**#N/A**	**2.6%**	**2.5%**	**2.5%**	2.7%	2.5%	2.8%	2.7%
Net PPE / Sales	Net PPE %	**#N/A**	**290.5%**	**343.5%**	**352.8%**	260.5%	269.3%	279.3%	246.8%
Other long-term op. A. / Sales	Other LT A%	**#N/A**	**49.7%**	**48.3%**	**49.7%**	47.8%	50.6%	50.7%	44.9%
Accts. pay./ Sales	Acct. Pay %	**#N/A**	**14.5%**	**21.0%**	**18.9%**	14.6%	14.4%	10.3%	10.2%
Accruals / Sales	Accruals %	**#N/A**	**0.0%**	**0.0%**	**0.0%**	0.0%	0.0%	0.0%	0.0%
Other current liabilities / Sales	Other CL %	**#N/A**	**6.2%**	**6.4%**	**4.9%**	8.6%	5.9%	5.5%	5.8%
Ratios to calculate operating taxes		**Competitor**	**Average**	**Trend**	**Most Recent**				
Deferred taxes/Net PPE	Def. Taxes %	**#N/A**	**23.6%**	**21.0%**	**21.6%**	23.4%	25.0%	24.6%	24.3%
Average tax rate (Taxes/EBT)	Avg. Tax rate	**#N/A**	**1.2%**	**-18.0%**	**-5.7%**	-12%	9%	13%	17%
Marginal tax rate	Margn. Tax	**#N/A**	**1.2%**	**-18.0%**	**-5.7%**	-11.6%	9%	13%	17%
Dividend and debt ratios		**Competitor**	**Average**	**Trend**	**Most Recent**				
Dividend policy: growth rate	Div. g	**#N/A**	**5.7%**	**5.5%**	**5.6%**	5.8%	5.8%	4.9%	-29.6%
Long-term debt / market value of firm	LTD/MV Firm	**#N/A**	**#N/A**	**#N/A**	**#N/A**	#N/A	#N/A	#N/A	#N/A
Preferred stock / market value of firm	Pf. Stk./MV F	**#N/A**	**#N/A**	**#N/A**	**#N/A**	#N/A	#N/A	#N/A	#N/A
Coupon rate on preferred stock	Pf. Stk. Coupon	**#N/A**	**#N/A**	**#N/A**	**#N/A**	#N/A	#N/A	#N/A	#N/A
Long-term debt / market value of firm	LTD/MV F	**#N/A**	**#N/A**	**#N/A**	**#N/A**	#N/A	#N/A	#N/A	#N/A
Ratios to calculate rest of income statement and balance sheet		**Competitor**	**Average**	**Trend**	**Most Recent**				
Nonop. inc. / Sales	Nonop inc %	**#N/A**	**2.6%**	**4.7%**	**4.9%**	1.5%	2.2%	1.9%	1.7%
Extr. inc. / Sales	Extr. inc. %	**#N/A**	**0.0%**	**0.0%**	**0.0%**	0.0%	0.0%	0.0%	0.0%
Long-term investments / Sales	L-T Inv. %	**#N/A**	**14.5%**	**17.6%**	**17.7%**	14.0%	12.1%	14.3%	13.4%
Other long-term liab. / Sales	Othr L-T Liab.%	**#N/A**	**21.0%**	**20.3%**	**23.6%**	17.5%	18.8%	24.1%	23.5%

B6

Condensed Historical Financ	Balance	Balance	Balance	Balance	Balance
You should not change any	OK	OK	OK	OK	OK
ALLETE INC.	12/31/19	12/31/18	12/31/17	12/31/16	12/31/15
	2019	2018	2017	2016	2015
Income Statement					
Sales	$ 1,240,500	$ 1,498,600	$ 1,419,300	$ 1,339,700	$ 1,486,400
Costs of goods sold (COGS)	858,700	1,110,500	1,034,900	937,600	1,127,400
Sales, general and administrative expense (SGA)	0	0	0	0	0
Depreciation	202,000	186,900	158,500	178,600	148,300
Operating profit	$ 179,800	$ 201,200	$ 225,900	$ 223,500	$ 210,700
Interest expense	64,900	67,900	67,800	70,300	64,900
Interest income	0	0	0	0	0
Nonoperating income (Expense)	60,618	22,665	31,752	25,151	24,925
Earnings before taxes (EBT)	$ 175,518	$ 155,965	$ 189,852	$ 178,351	$ 170,725
Tax expense	(10,082)	(18,135)	17,652	23,051	29,625
Net income before extraordinary items	$ 185,600	$ 174,100	$ 172,200	$ 155,300	$ 141,100
After-tax extraordinary income (Expense)	0	0	0	0	0
Net income (NI)	$ 185,600	$ 174,100	$ 172,200	$ 155,300	$ 141,100
Dividends-- preferred	$ 0	$ 0	$ 0	$ 0	$ 0
Dividends-- common	$ 121,400	$ 115,000	$ 108,700	$ 102,700	$ 97,900
Additions to RE	$ 64,200	$ 59,100	$ 63,500	$ 52,600	$ 43,200
Balance Sheet					
Assets					
Cash	$ 69,300	$ 69,100	$ 98,900	$ 27,500	$ 97,000
Inventory	72,800	86,700	95,900	104,200	117,100
Accounts receivable	96,400	144,400	135,100	122,500	121,200
Other short-term operating assets	31,000	34,100	37,600	40,300	35,700
Short-term investments	0	0	0	0	0
Total current assets	$ 269,500	$ 334,300	$ 367,500	$ 294,500	$ 371,000
Net plant, property, & equipment (PPE)	4,377,000	3,904,400	3,822,400	3,741,200	3,669,100
Other long-term operating assets	616,800	716,100	718,300	679,500	667,900
Long-term investments	219,500	210,200	171,800	191,200	199,100
Total assets	$ 5,482,800	$ 5,165,000	$ 5,080,000	$ 4,906,400	$ 4,907,100
Liabilities and Equity					
Accounts payable (AP)	$ 234,100	$ 219,100	$ 203,900	$ 138,100	$ 151,400
Accruals	0	0	0	0	0
Other operating current liabilities	60,400	128,500	83,200	73,700	86,100
All short-term debt	212,900	57,500	64,100	187,700	37,900
Total current liabilities	$ 507,400	$ 405,100	$ 351,200	$ 399,500	$ 275,400
Long-term debt	1,400,900	1,428,500	1,439,200	1,370,400	1,568,700
Deferred taxes	945,900	913,000	954,300	920,800	891,600
Preferred stock	0	0	0	0	0
Other long-term liabilities	293,000	262,600	267,100	322,700	349,000
Total liabilities	$ 3,147,200	$ 3,009,200	$ 3,011,800	$ 3,013,400	$ 3,084,700
Par plus PIC Less treasury (and other adjustments)	(2,375,284)	(2,490,884)	(2,519,384)	(2,631,084)	(2,649,084)
Retained earnings (RE)	4,710,884	4,646,684	4,587,584	4,524,084	4,471,484
Total common equity	$ 2,335,600	$ 2,155,800	$ 2,068,200	$ 1,893,000	$ 1,822,400
Total liabilities and equity	$ 5,482,800	$ 5,165,000	$ 5,080,000	$ 4,906,400	$ 4,907,100
Check to see if sheets balance	**Balance**	**Balance**	**Balance**	**Balance**	**Balance**
Statement of Cash Flows					
Operating Activities					
Net income	$ 185,600	$ 174,100	$ 172,200	$ 155,300	$ 141,100
Depreciation	202,000	186,900	158,500	178,600	148,300
Change in deferred tax	32,900	(41,300)	33,500	29,200	813,600
Change in inventory	13,900	9,200	8,300	12,900	3,484,900
Change in accounts receivable	48,000	(9,300)	(12,600)	(1,300)	434,800
Change in other short-term operating assets	3,100	3,500	2,700	(4,600)	92,300
Change in accounts payable	15,000	15,200	65,800	(13,300)	(1,206,600)
Change in accruals	0	0	0	0	(1,090,000)
Change in other current liabilities	(68,100)	45,300	9,500	(12,400)	86,100
Net cash from operating activities	$ 432,400	$ 383,600	$ 437,900	$ 344,400	$ 2,904,500
Investing Activities					
Investment in PPE	$ (674,600)	$ (268,900)	$ (239,700)	$ (250,700)	$ 2,691,600
Investment in other long-term oper. ass.	99,300	2,200	(38,800)	(11,600)	(422,900)
Net cash from investing activities	$ (575,300)	$ (266,700)	$ (278,500)	$ (262,300)	$ 2,268,700
Financing Activities					
Change in short-term investments	$ 0	$ 0	$ 0	$ 0	$ 2,000
Change in long-term investments	(9,300)	(38,400)	19,400	7,900	(184,100)
Change in short-term debt	155,400	(6,600)	(123,600)	149,800	29,900
Change in long-term debt	(27,600)	(10,700)	68,800	(198,300)	265,700
Preferred dividends	0	0	0	0	0
Change in preferred stock	0	0	0	0	0
Change in other long-term liabilities	30,400	(4,500)	(55,600)	(26,300)	55,000
Change in common stock (Par + PIC)	115,600	28,500	111,700	18,000	(5,318,800)
Common dividends	(121,400)	(115,000)	(108,700)	(102,700)	(97,900)
Net cash from financing activities	$ 143,100	$ (146,700)	$ (88,000)	$ (151,600)	$ (5,248,200)
Net cash flow	$ 200	$ (29,800)	$ 71,400	$ (69,500)	$ (75,000)
Starting cash	69,100	98,900	27,500	97,000	172,000
Ending cash	$ 69,300	$ 69,100	$ 98,900	$ 27,500	$ 97,000
Check for consistency with cash shown in balance s	**OK**	**OK**	**OK**	**OK**	**OK**

Allete Adj Cl	HPR	HPY	Date	Price	HPR	HPY		75.495972	1.003959	0.40%	5/9/2019	2,870.72	0.996979	-0.30%
70.377846			12/31/2018	2,506.85				76.445023	1.012571	1.26%	5/10/2019	2,881.40	1.00372	0.37%
67.847862	0.964051	-3.59%	1/2/2019	2,510.03	1.001269	0.13%	beta S&p500	77.2173	1.010102	1.01%	5/13/2019	2,811.87	0.975869	-2.41%
67.857079	1.000136	0.01%	1/3/2019	2,447.89	0.975243	-2.48%	0.323	76.231483	0.987233	-1.28%	5/14/2019	2,834.41	1.008016	0.80%
68.789673	1.013744	1.37%	1/4/2019	2,531.94	1.034336	3.43%		76.203369	0.999631	-0.04%	5/15/2019	2,850.96	1.005839	0.58%
68.309532	0.99302	-0.70%	1/7/2019	2,549.69	1.00701	0.70%		76.596947	1.005165	0.52%	5/16/2019	2,876.32	1.008895	0.89%
69.879219	1.022979	2.30%	1/8/2019	2,574.41	1.009695	0.97%		76.943657	1.004526	0.45%	5/17/2019	2,859.53	0.994163	-0.58%
68.171036	0.975555	-2.44%	1/9/2019	2,584.96	1.004098	0.41%		76.690651	0.996712	-0.33%	5/20/2019	2,840.23	0.993251	-0.67%
69.279045	1.016253	1.63%	1/10/2019	2,596.64	1.004518	0.45%		76.784355	1.001222	0.12%	5/21/2019	2,864.36	1.008496	0.85%
69.103615	0.997468	-0.25%	1/11/2019	2,596.26	0.999854	-0.01%		77.29039	1.00659	0.66%	5/22/2019	2,856.27	0.997176	-0.28%
67.552391	0.977552	-2.24%	1/14/2019	2,582.61	0.994742	-0.53%		77.487175	1.002546	0.25%	5/23/2019	2,822.24	0.988086	-1.19%
68.669632	1.016539	1.65%	1/15/2019	2,610.30	1.010722	1.07%		77.299751	0.997581	-0.24%	5/24/2019	2,826.06	1.001354	0.14%
68.87278	1.002958	0.30%	1/16/2019	2,616.10	1.002222	0.22%		76.493874	0.989575	-1.04%	5/28/2019	2,802.39	0.991624	-0.84%
69.528366	1.009519	0.95%	1/17/2019	2,635.96	1.007591	0.76%		75.987839	0.993385	-0.66%	5/29/2019	2,783.02	0.993088	-0.69%
69.509888	0.999734	-0.03%	1/18/2019	2,670.71	1.013183	1.32%		75.706718	0.9963	-0.37%	5/30/2019	2,788.86	1.002098	0.21%
69.288284	0.996812	-0.32%	1/22/2019	2,632.90	0.985843	-1.42%		76.737518	1.013616	1.36%	5/31/2019	2,752.06	0.986805	-1.32%
70.451721	1.016791	1.68%	1/23/2019	2,638.70	1.002203	0.22%		77.440323	1.009159	0.92%	6/3/2019	2,744.45	0.997235	-0.28%
70.941093	1.006946	0.69%	1/24/2019	2,642.33	1.001376	0.14%		77.552773	1.001452	0.15%	6/4/2019	2,803.27	1.021432	2.14%
69.140556	0.974619	-2.54%	1/25/2019	2,664.76	1.008489	0.85%		79.548744	1.025737	2.57%	6/5/2019	2,826.15	1.008162	0.82%
68.678871	0.993323	-0.67%	1/28/2019	2,643.85	0.992153	-0.78%		79.895477	1.004359	0.44%	6/6/2019	2,843.49	1.006136	0.61%
69.140556	1.006722	0.67%	1/29/2019	2,640.00	0.998544	-0.15%		79.642456	0.996833	-0.32%	6/7/2019	2,873.34	1.010498	1.05%
69.666862	1.007612	0.76%	1/30/2019	2,681.05	1.015549	1.55%		79.370689	0.996588	-0.34%	6/10/2019	2,886.73	1.00466	0.47%
71.042664	1.019748	1.97%	1/31/2019	2,704.10	1.008597	0.86%		78.855309	0.993507	-0.65%	6/11/2019	2,885.72	0.99965	-0.04%
69.639168	0.980244	-1.98%	2/1/2019	2,706.53	1.000899	0.09%		79.351959	1.006298	0.63%	6/12/2019	2,879.84	0.997962	-0.20%
69.990021	1.005038	0.50%	2/4/2019	2,724.87	1.006776	0.68%		79.398819	1.000591	0.06%	6/13/2019	2,891.64	1.004097	0.41%
70.30397	1.004486	0.45%	2/5/2019	2,737.70	1.004708	0.47%		79.586227	1.00236	0.24%	6/14/2019	2,886.98	0.998388	-0.16%
70.073143	0.996717	-0.33%	2/6/2019	2,731.61	0.997776	-0.22%		79.305107	0.996468	-0.35%	6/17/2019	2,889.67	1.000932	0.09%
71.25502	1.016866	1.69%	2/7/2019	2,706.05	0.990643	-0.94%		79.080215	0.997164	-0.28%	6/18/2019	2,917.75	1.009717	0.97%
73.221771	1.027602	2.76%	2/8/2019	2,707.88	1.000676	0.07%		79.932961	1.010783	1.08%	6/19/2019	2,926.46	1.002985	0.30%
71.236565	0.972888	-2.71%	2/11/2019	2,709.80	1.000709	0.07%		80.401505	1.005862	0.59%	6/20/2019	2,954.18	1.009472	0.95%
71.061127	0.997537	-0.25%	2/12/2019	2,744.73	1.01289	1.29%		79.567497	0.989627	-1.04%	6/21/2019	2,950.46	0.998741	-0.13%
71.25502	1.002729	0.27%	2/13/2019	2,753.03	1.003024	0.30%		79.033363	0.993287	-0.67%	6/24/2019	2,945.35	0.998268	-0.17%
72.52787	1.017863	1.79%	2/14/2019	2,745.73	0.997348	-0.27%		78.967751	0.99917	-0.08%	6/25/2019	2,917.38	0.990504	-0.95%
73.867714	1.018474	1.85%	2/15/2019	2,775.60	1.010879	1.09%		76.981148	0.974843	-2.52%	6/26/2019	2,913.78	0.998766	-0.12%
74.323624	1.006172	0.62%	2/19/2019	2,779.76	1.001499	0.15%		76.953041	0.999635	-0.04%	6/27/2019	2,924.92	1.003823	0.38%
74.639969	1.004256	0.43%	2/20/2019	2,784.70	1.001777	0.18%		77.974457	1.013273	1.33%	6/28/2019	2,941.76	1.005757	0.58%
75.67276	1.013837	1.38%	2/21/2019	2,774.88	0.996474	-0.35%		77.768295	0.997356	-0.26%	7/1/2019	2,964.33	1.007672	0.77%
76.584595	1.01205	1.21%	2/22/2019	2,792.67	1.006411	0.64%		79.276993	1.0194	1.94%	7/2/2019	2,973.01	1.002928	0.29%
75.905373	0.991131	-0.89%	2/25/2019	2,796.11	1.001232	0.12%		80.607643	1.016785	1.68%	7/3/2019	2,995.82	1.007672	0.77%
75.84024	0.999142	-0.09%	2/26/2019	2,793.90	0.99921	-0.08%		80.65451	1.000581	0.06%	7/5/2019	2,990.41	0.998194	-0.18%
75.868156	1.000368	0.04%	2/27/2019	2,792.38	0.999456	-0.05%		80.87941	1.002788	0.28%	7/8/2019	2,975.95	0.995165	-0.48%
75.412239	0.993991	-0.60%	2/28/2019	2,784.49	0.997174	-0.28%		80.795067	0.998957	-0.10%	7/9/2019	2,979.63	1.001237	0.12%
75.998405	1.007773	0.78%	3/1/2019	2,803.69	1.006895	0.69%		80.991867	1.002436	0.24%	7/10/2019	2,993.07	1.004511	0.45%
77.263824	1.016651	1.67%	3/4/2019	2,792.81	0.996119	-0.39%		81.516624	1.006479	0.65%	7/11/2019	2,999.91	1.002285	0.23%
75.961197	0.983141	-1.69%	3/5/2019	2,789.65	0.998869	-0.11%		81.394806	0.998506	-0.15%	7/12/2019	3,013.77	1.00462	0.46%
76.30545	1.004532	0.45%	3/6/2019	2,771.45	0.993476	-0.65%		81.413528	1.00023	0.02%	7/15/2019	3,014.30	1.000176	0.02%
76.873039	1.007438	0.74%	3/7/2019	2,748.93	0.991874	-0.81%		81.27298	0.998274	-0.17%	7/16/2019	3,004.04	0.996596	-0.34%
76.779976	0.998789	-0.12%	3/8/2019	2,743.07	0.997868	-0.21%		81.085564	0.997694	-0.23%	7/17/2019	2,984.42	0.993469	-0.65%
77.66391	1.011513	1.15%	3/11/2019	2,783.30	1.014666	1.47%		81.88208	1.009823	0.98%	7/18/2019	2,995.11	1.003582	0.36%
77.998863	1.004313	0.43%	3/12/2019	2,791.52	1.002953	0.30%		80.513939	0.983291	-1.67%	7/19/2019	2,976.61	0.993823	-0.62%
77.440605	0.992843	-0.72%	3/13/2019	2,810.92	1.00695	0.70%		80.176598	0.99581	-0.42%	7/22/2019	2,985.03	1.002829	0.28%
77.012589	0.994473	-0.55%	3/14/2019	2,808.48	0.999132	-0.09%		80.176598	1	0.00%	7/23/2019	3,005.47	1.006848	0.68%
77.626686	1.007974	0.80%	3/15/2019	2,822.48	1.004985	0.50%		80.429611	1.003156	0.32%	7/24/2019	3,019.56	1.004688	0.47%
77.366158	0.996644	-0.34%	3/18/2019	2,832.94	1.003706	0.37%		80.139099	0.996388	-0.36%	7/25/2019	3,003.67	0.994738	-0.53%
76.12867	0.984005	-1.60%	3/19/2019	2,832.57	0.999869	-0.01%		81.141785	1.012512	1.25%	7/26/2019	3,025.86	1.007388	0.74%
75.784416	0.995478	-0.45%	3/20/2019	2,824.23	0.997056	-0.29%		81.750893	1.007507	0.75%	7/29/2019	3,020.97	0.998384	-0.16%
76.612495	1.010927	1.09%	3/21/2019	2,854.88	1.010853	1.09%		81.619705	0.998395	-0.16%	7/30/2019	3,013.18	0.997421	-0.26%
76.510147	0.998664	-0.13%	3/22/2019	2,800.71	0.981025	-1.90%		81.479134	0.998278	-0.17%	7/31/2019	2,980.38	0.989114	-1.09%
76.928864	1.005473	0.55%	3/25/2019	2,798.36	0.999161	-0.08%		81.104301	0.9954	-0.46%	8/1/2019	2,953.56	0.991001	-0.90%
77.52433	1.00774	0.77%	3/26/2019	2,818.46	1.007183	0.72%		79.754898	0.983362	-1.66%	8/2/2019	2,932.05	0.992717	-0.73%
77.04052	0.993759	-0.62%	3/27/2019	2,805.37	0.995356	-0.46%		79.651825	0.998708	-0.13%	8/5/2019	2,844.74	0.970222	-2.98%
76.268257	0.989976	-1.00%	3/28/2019	2,815.44	1.00359	0.36%		79.745529	1.001176	0.12%	8/6/2019	2,881.77	1.013017	1.30%
76.510147	1.003172	0.32%	3/29/2019	2,834.40	1.006734	0.67%		79.84861	1.001293	0.13%	8/7/2019	2,883.98	1.000767	0.08%
76.12867	0.995014	-0.50%	4/1/2019	2,867.19	1.011569	1.16%		81.066826	1.015257	1.53%	8/8/2019	2,938.09	1.018762	1.88%
75.933281	0.997433	-0.26%	4/2/2019	2,867.24	1.000017	0.00%		80.195335	0.98925	-1.08%	8/9/2019	2,918.65	0.993383	-0.66%
76.20311	1.003554	0.36%	4/3/2019	2,873.40	1.002148	0.21%		79.323853	0.989133	-1.09%	8/12/2019	2,883.75	0.988042	-1.20%
76.482239	1.003663	0.37%	4/4/2019	2,879.39	1.002085	0.21%		79.567497	1.003072	0.31%	8/13/2019	2,926.32	1.014762	1.48%
77.570862	1.014234	1.42%	4/5/2019	2,892.74	1.004636	0.46%		78.867325	0.9912	-0.88%	8/14/2019	2,840.60	0.970707	-2.93%
76.659027	0.988245	-1.18%	4/8/2019	2,895.77	1.001047	0.10%		79.650536	1.009931	0.99%	8/15/2019	2,847.60	1.002464	0.25%
76.426422	0.996966	-0.30%	4/9/2019	2,878.20	0.993933	-0.61%		80.30162	1.008174	0.82%	8/16/2019	2,888.68	1.014426	1.44%
75.477371	0.987582	-1.24%	4/10/2019	2,888.21	1.003478	0.35%		80.811172	1.006345	0.63%	8/19/2019	2,923.65	1.012106	1.21%
75.691368	1.002835	0.28%	4/11/2019	2,888.32	1.000038	0.00%		80.622459	0.997665	-0.23%	8/20/2019	2,900.51	0.992085	-0.79%
75.868156	1.002336	0.23%	4/12/2019	2,907.41	1.006609	0.66%		80.943283	1.003979	0.40%	8/21/2019	2,924.43	1.008247	0.82%
76.11937	1.003311	0.33%	4/15/2019	2,905.58	0.999371	-0.06%		80.839485	0.998718	-0.13%	8/22/2019	2,922.95	0.999494	-0.05%
74.602753	0.980076	-1.99%	4/16/2019	2,907.06	1.000509	0.05%		79.291954	0.980857	-1.91%	8/23/2019	2,847.11	0.974054	-2.59%
74.239876	0.995136	-0.49%	4/17/2019	2,900.45	0.997726	-0.23%		80.962158	1.021064	2.11%	8/26/2019	2,878.38	1.010983	1.10%
73.997963	0.996741	-0.33%	4/18/2019	2,905.03	1.001579	0.16%		80.377113	0.992774	-0.72%	8/27/2019	2,869.16	0.996797	-0.32%
73.932831	0.99912	-0.09%	4/22/2019	2,907.97	1.001012	0.10%		79.877007	0.993778	-0.62%	8/28/2019	2,887.94	1.006545	0.65%
74.184052	1.003398	0.34%	4/23/2019	2,933.68	1.008841	0.88%		80.641327	1.009569	0.96%	8/29/2019	2,924.58	1.012687	1.27%
74.481804	1.004014	0.40%	4/24/2019	2,927.25	0.997808	-0.22%		80.896111	1.003159	0.32%	8/30/2019	2,926.46	1.000643	0.06%
74.481804	1	0.00%	4/25/2019	2,926.17	0.999631	-0.04%		81.698181	1.009915	0.99%	9/3/2019	2,906.27	0.993101	-0.69%
74.798149	1.004247	0.42%	4/26/2019	2,939.88	1.004685	0.47%		82.141685	1.005429	0.54%	9/4/2019	2,937.78	1.010842	1.08%
74.602753	0.997388	-0.26%	4/29/2019	2,943.03	1.001071	0.11%		80.896111	0.984836	-1.52%	9/5/2019	2,976.00	1.01301	1.30%
75.784416	1.015839	1.58%	4/30/2019	2,945.83	1.000951	0.10%		80.282761	0.992418	-0.76%	9/6/2019	2,978.71	1.000911	0.09%
74.807442	0.987109	-1.29%	5/1/2019	2,923.73	0.992498	-0.75%		79.933609	0.995651	-0.43%	9/9/2019	2,978.43	0.999906	-0.01%
74.714409	0.998756	-0.12%	5/2/2019	2,917.52	0.997876	-0.21%		80.273315	1.00425	0.43%	9/10/2019	2,979.39	1.000322	0.03%
76.342682	1.021793	2.18%	5/3/2019	2,945.64	1.009638	0.96%		82.217155	1.024215	2.42%	9/11/2019	3,000.93	1.00723	0.72%
77.2173	1.011456	1.15%	5/6/2019	2,932.47	0.995529	-0.45%		82.273773	1.000689	0.07%	9/12/2019	3,009.57	1.002879	0.29%
76.482239	0.990481	-0.95%	5/7/2019	2,884.05	0.983488	-1.65%		82.160553	0.998624	-0.14%	9/13/2019	3,007.39	0.999276	-0.07%
75.198235	0.983212	-1.68%	5/8/2019	2,879.42	0.998395	-0.16%		81.641563	0.993683	-0.63%	9/16/2019	2,997.96	0.996864	-0.31%

81.726479	1.00104	0.10%		9/17/2019	3,005.70	1.002582	0.26%
81.896324	1.002078	0.21%		9/18/2019	3,006.73	1.000343	0.03%
82.226593	1.004033	0.40%		9/19/2019	3,006.79	1.00002	0.00%
82.368134	1.001721	0.17%		9/20/2019	2,992.07	0.995104	-0.49%
82.330391	0.999542	-0.05%		9/23/2019	2,991.78	0.999903	-0.01%
82.67009	1.004126	0.41%		9/24/2019	2,966.60	0.991584	-0.84%
83.198517	1.006392	0.64%		9/25/2019	2,984.87	1.006159	0.62%
83.047546	0.998185	-0.18%		9/26/2019	2,977.62	0.997571	-0.24%
82.66066	0.995341	-0.47%		9/27/2019	2,961.79	0.994684	-0.53%
82.481369	0.997831	-0.22%		9/30/2019	2,976.74	1.005048	0.50%
82.207733	0.996682	-0.33%		10/1/2019	2,940.25	0.987742	-1.23%
81.301865	0.988981	-1.10%		10/2/2019	2,887.61	0.982097	-1.79%
81.141441	0.998027	-0.20%		10/3/2019	2,910.63	1.007972	0.80%
82.207733	1.013141	1.31%		10/4/2019	2,952.01	1.014217	1.42%
81.783112	0.994835	-0.52%		10/7/2019	2,938.79	0.995522	-0.45%
80.91497	0.989385	-1.06%		10/8/2019	2,893.06	0.984439	-1.56%
81.141441	1.002799	0.28%		10/9/2019	2,919.40	1.009105	0.91%
81.877464	1.009071	0.91%		10/10/2019	2,938.13	1.006416	0.64%
82.254913	1.00461	0.46%		10/11/2019	2,970.27	1.010939	1.09%
81.943504	0.996214	-0.38%		10/14/2019	2,966.15	0.998613	-0.14%
81.377327	0.993091	-0.69%		10/15/2019	2,995.68	1.009956	1.00%
80.77343	0.992579	-0.74%		10/16/2019	2,989.69	0.998	-0.20%
81.415092	1.007944	0.79%		10/17/2019	2,997.95	1.002763	0.28%
82.122795	1.008693	0.87%		10/18/2019	2,986.20	0.996081	-0.39%
82.179405	1.000689	0.07%		10/21/2019	3,006.72	1.006872	0.69%
82.1511	0.999656	-0.03%		10/22/2019	2,995.99	0.996431	-0.36%
82.330391	1.002182	0.22%		10/23/2019	3,004.52	1.002847	0.28%
82.292648	0.999542	-0.05%		10/24/2019	3,010.29	1.00192	0.19%
81.481148	0.990139	-0.99%		10/25/2019	3,022.55	1.004073	0.41%
80.613014	0.989346	-1.07%		10/28/2019	3,039.42	1.005581	0.56%
81.198067	1.007258	0.73%		10/29/2019	3,036.89	0.999168	-0.08%
81.594376	1.004881	0.49%		10/30/2019	3,046.77	1.003253	0.33%
81.207497	0.995259	-0.47%		10/31/2019	3,037.56	0.996977	-0.30%
81.839722	1.007785	0.78%		11/1/2019	3,066.91	1.009662	0.97%
79.895866	0.976248	-2.38%		11/4/2019	3,078.27	1.003704	0.37%
79.093796	0.989961	-1.00%		11/5/2019	3,074.62	0.998814	-0.12%
78.21624	0.988905	-1.11%		11/6/2019	3,076.78	1.000703	0.07%
76.376183	0.976475	-2.35%		11/7/2019	3,085.18	1.00273	0.27%
75.357079	0.986657	-1.33%		11/8/2019	3,093.08	1.002561	0.26%
74.875839	0.993614	-0.64%		11/11/2019	3,087.01	0.998038	-0.20%
75.215538	1.004537	0.45%		11/12/2019	3,091.84	1.001565	0.16%
76.564903	1.01794	1.79%		11/13/2019	3,094.04	1.000712	0.07%
76.895691	1.00432	0.43%		11/14/2019	3,096.63	1.000837	0.08%
76.667572	0.997033	-0.30%		11/15/2019	3,120.46	1.007695	0.77%
76.030716	0.991693	-0.83%		11/18/2019	3,122.03	1.000503	0.05%
75.821617	0.99725	-0.28%		11/19/2019	3,120.18	0.999407	-0.06%
76.144791	1.004262	0.43%		11/20/2019	3,108.46	0.996244	-0.38%
75.707558	0.994258	-0.57%		11/21/2019	3,103.54	0.998417	-0.16%
75.717064	1.000126	0.01%		11/22/2019	3,110.29	1.002175	0.22%
75.622017	0.998745	-0.13%		11/25/2019	3,133.64	1.007507	0.75%
75.736076	1.001508	0.15%		11/26/2019	3,140.52	1.002196	0.22%
76.534477	1.010542	1.05%		11/27/2019	3,153.63	1.004174	0.42%
76.144791	0.994908	-0.51%		11/29/2019	3,140.98	0.995989	-0.40%
75.498451	0.991512	-0.85%		12/2/2019	3,113.87	0.991369	-0.86%
76.078255	1.00768	0.77%		12/3/2019	3,093.20	0.993362	-0.66%
76.696075	1.008121	0.81%		12/4/2019	3,112.76	1.006324	0.63%
76.277855	0.994547	-0.55%		12/5/2019	3,117.43	1.0015	0.15%
75.39389	0.988411	-1.16%		12/6/2019	3,145.91	1.009136	0.91%
74.928139	0.993822	-0.62%		12/9/2019	3,135.96	0.996837	-0.32%
75.564972	1.008499	0.85%		12/10/2019	3,132.52	0.998903	-0.11%
75.660027	1.001258	0.13%		12/11/2019	3,141.63	1.002908	0.29%
74.91864	0.990201	-0.98%		12/12/2019	3,168.57	1.008575	0.86%
75.431915	1.006851	0.69%		12/13/2019	3,168.80	1.000073	0.01%
76.677063	1.016507	1.65%		12/16/2019	3,191.45	1.007148	0.71%
76.705589	1.000372	0.04%		12/17/2019	3,192.52	1.000335	0.03%
77.618065	1.011896	1.19%		12/18/2019	3,191.14	0.999568	-0.04%
77.732124	1.001469	0.15%		12/19/2019	3,205.37	1.004459	0.45%
77.779655	1.000611	0.06%		12/20/2019	3,221.22	1.004945	0.49%
76.515488	0.983747	-1.63%		12/23/2019	3,224.01	1.000866	0.09%
76.43943	0.999006	-0.10%		12/24/2019	3,223.38	0.999805	-0.02%
76.315872	0.998384	-0.16%		12/26/2019	3,239.91	1.005128	0.51%
76.353905	1.000498	0.05%		12/27/2019	3,240.02	1.000034	0.00%
77.038269	1.008963	0.90%		12/30/2019	3,221.29	0.994219	-0.58%
77.152306	1.00148	0.15%		12/31/2019	3,230.78	1.002946	0.29%

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