



Proposed Power Sales Contract

Alcoa's Perspective

- Introductions
 - Smelter, Current Contract, Proposed Power Sales Contract
- Why is the Proposed Contract Good For Alcoa?
 - Corporate perspective
 - Plant Economics (CRU Study)
 - Union perspective
 - Plant Management perspective
- Where are the risks for Alcoa?
- Why is the Proposed Contract Good for the Community?
- Why is the Proposed Contract Good for the PUD Customer/Owners?



- **189,600 mt/year capacity**
 - **4 Potlines (2 operating)**
- **2,800 acres in Chelan County, WA**
- **390 employees**

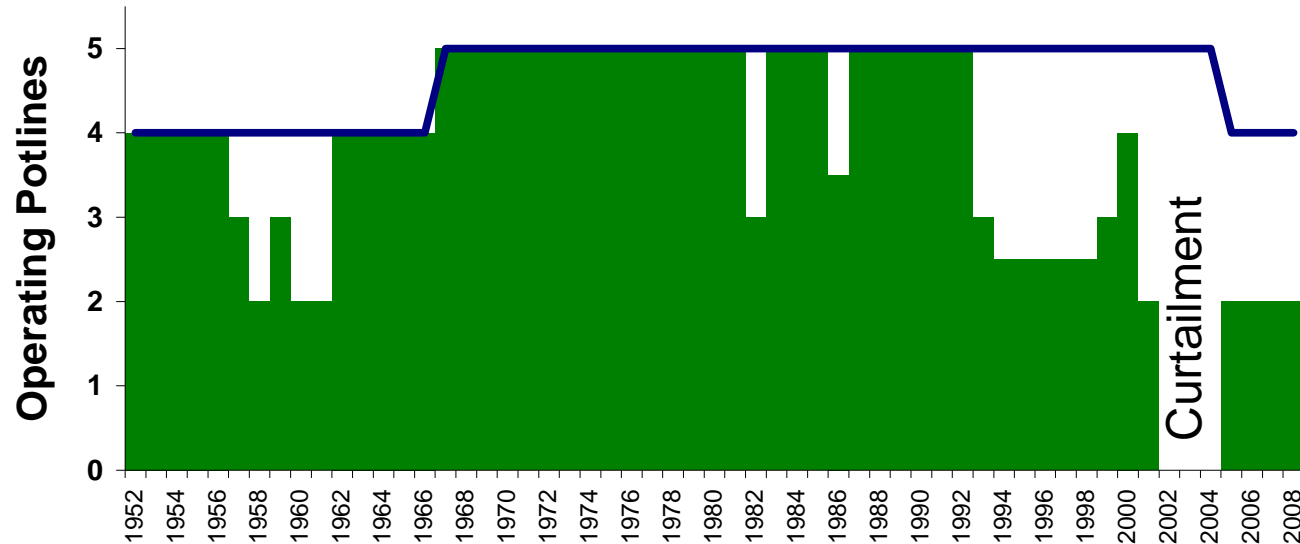
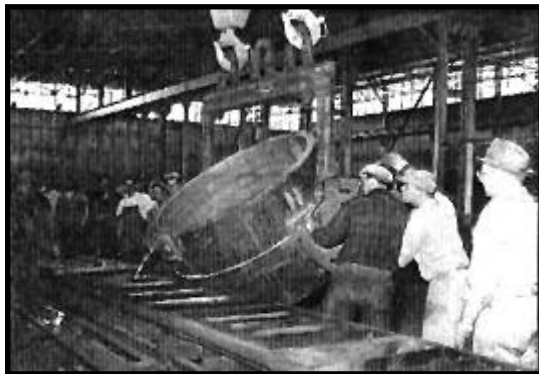
- **Smelter & Casthouse**
 - **54 Years in operation**
 - **Well capitalized & maintained**

- **Products: Primary, Foundry**



Wenatchee Works Production Capacity

Potline	Technology	Vintage	MTPY
1	T51	1952	43,850
2	T51	1952	43,850
3	T51	1952	43,193
4	T51	1952	43,193
5	P100	1967	54,021
TOTAL CURRENT CAPACITY =			185,000





Current Contract

- Current Contract
 - Expires November 2011
 - 23% of Rocky Reach Output at Cost
 - Take-or-pay
 - Credit for surplus power sales
 - 42 MW of system power
 - Use as needed
 - No credit for unused amounts
 - Exchange Agreement with PacifiCorp helps to match variable hydro output to steady load
 - With the total package, Alcoa can operate 2 potlines (188MW) with minimal market exposure

Proposed Term Sheet post-2011

- New contract from 2011 to 2028
 - 25% of Rocky Reach and Rock Island Output
 - 20% equals existing power amount
 - 5% represents one additional potline
 - Take-or-pay at a new cost level
 - Accelerated debt repayment
 - Expense some capital additions
 - Other new “cost” factors – Transmission, Debt Reduction, Credit prem.
 - Effectively doubles power cost
 - CPUD subject to most of the same costs – interests aligned
 - Operating criteria must be met - Surplus Sales Revenue to be applied against market purchases only
 - \$17.5M Up-front, non-refundable Capacity Reservation charge
 - New exchange agreement will be necessary to match variable hydro output with steady load. Alcoa will take and pay for an additional 1%, but lose its rights to use some of the project capabilities if no adequate exchange agreement.
 - Early termination fee



Bottom Line

- The Proposed Agreement is good for Chelan County
 - It provides more than twice the economic benefit as selling surplus power on the market

- The Proposed Agreement will work for Alcoa
 - Economics of increased operations will allow us to pay higher power rates and remain competitive



Why is this contract important to Alcoa, Inc?

- Alcoa's future position as a leader in primary aluminum production will be dictated by our access to economical energy supplies
- Global aluminum demand expected to double by 2025
 - Driven by China, developing world
 - Aerospace, building/construction, transportation
- To maintain Alcoa's market share to meet this demand, we must maintain existing portfolio of smelters plus develop new smelters
 - Requires renewal of existing power contracts plus development of thousands of additional MW



Why is this contract important to Alcoa, Inc?

However...

- Global Energy Trends are Challenging
 - Energy demand is increasing, especially in developing countries
 - Limited “stranded resources” and competition is fierce
 - Prices are rising (fuel, capital costs)
 - Environmental regulations have added a new layer of cost
 - Climate Change regulations will continue to grow in importance

- Thus, extending life of Wenatchee Works enables Alcoa several corporate advantages:
 - Avoid the cost of building replacement capacity for Wenatchee Works somewhere else
 - Clean renewable hydropower supports corporate sustainability goals and mitigates carbon risk
 - Supports a financially healthy existing smelter beyond expiration of current power contract



Wenatchee Smelter Operating Outlook

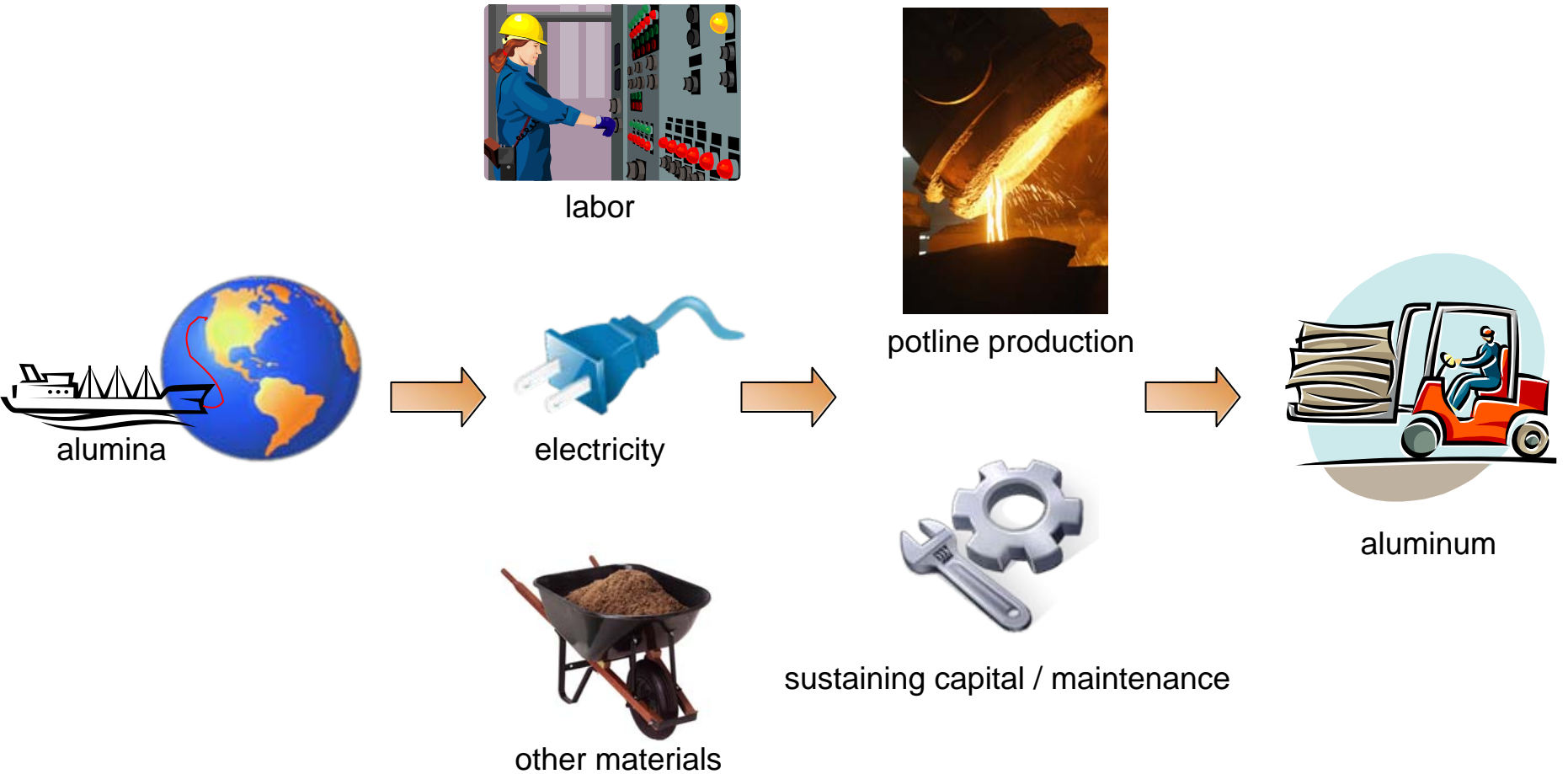
This presentation was prepared by CRU Strategies, an international consulting firm specializing in the aluminum industry.

This addresses the following questions:

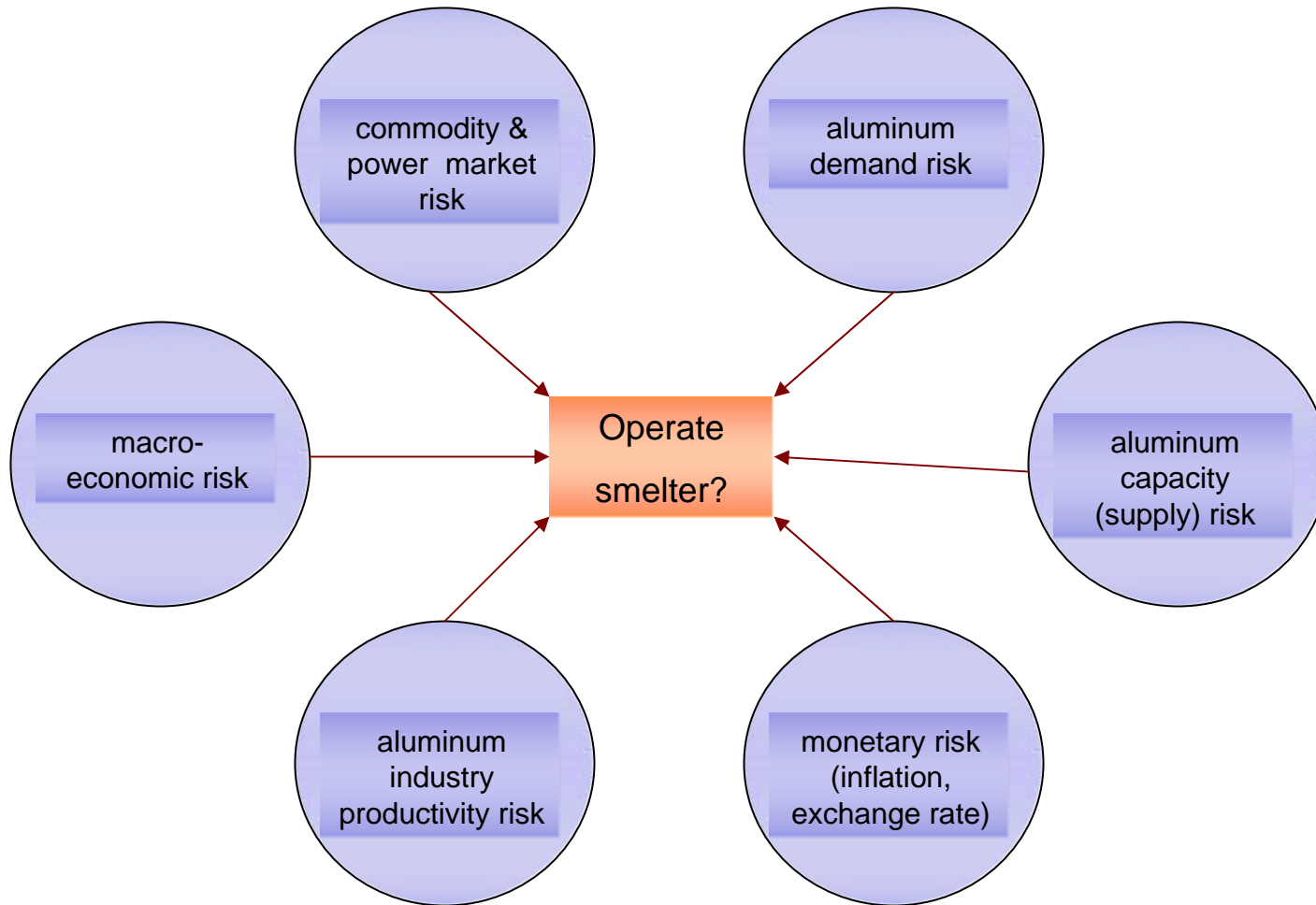
- What are the best operating scenarios for Wenatchee Works?
- What are the risks involved with aluminum smelting?

- More power supplied by Chelan likely leads to:
 - higher production and more employment
 - higher probability of sustainable operation
- Profitable aluminum smelting is very sensitive to:
 - price of alumina, aluminum, and electricity
 - variations in availability of electricity
- **Bottom line:**
 - *power supplied for 3 potlines likely results in sustained smelter operation for life of contract*
 - *power supplied for only 2 potlines unlikely to result in continued operation of smelter*

What do we need to make aluminum?



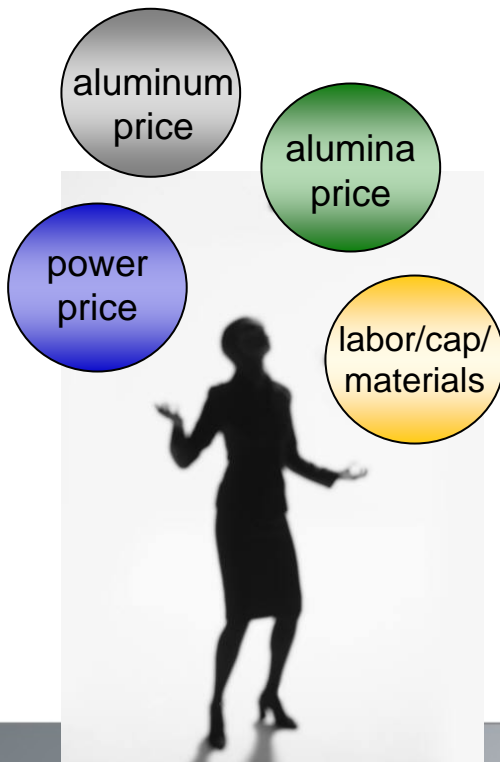
Aluminum smelters face several risks...



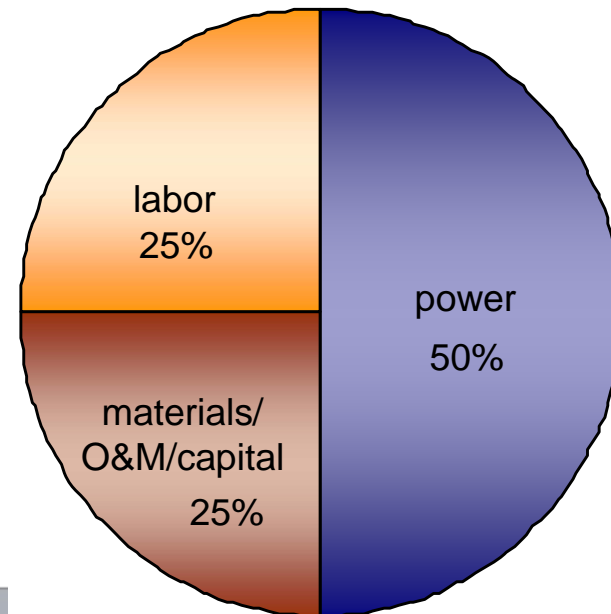
Profitable smelter operation is a balancing act...

smelter margin = aluminum price – alumina price

- out of this margin, a smelter must pay all of its power, labor, capital, maintenance, materials, business & corporate overhead costs.



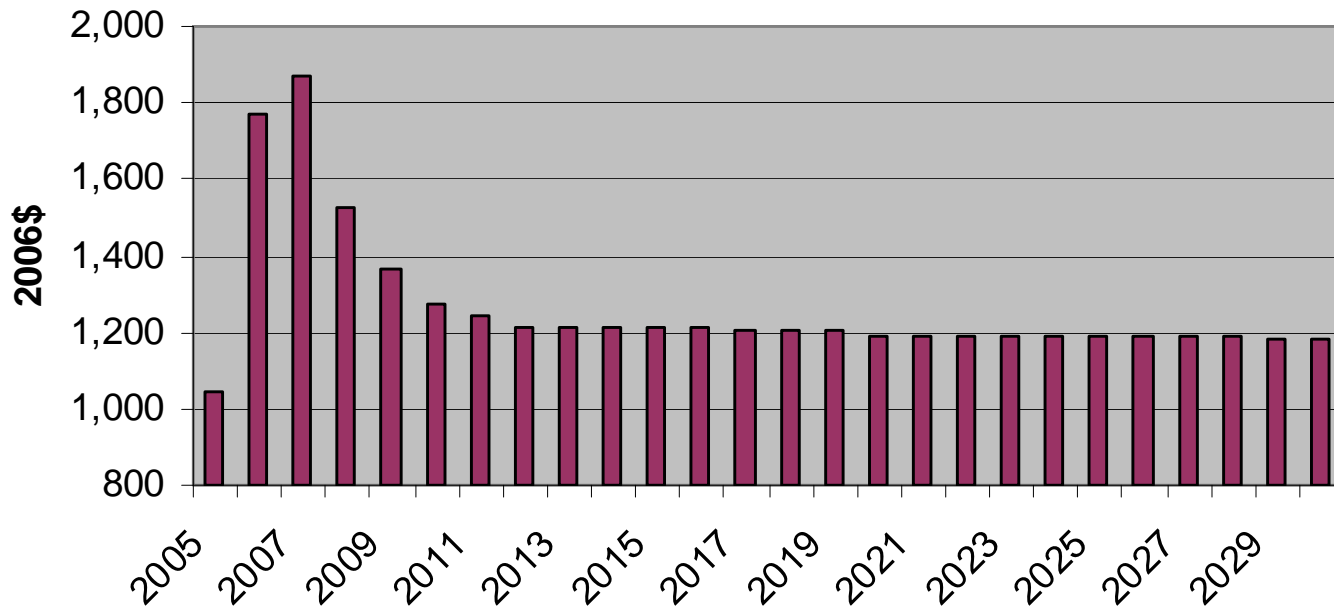
Rough breakdown of relative costs to be paid out of smelter margins



CRU smelter margins forecast

- The margins below are the estimates of the difference between LME 3-month aluminum prices and the cost of alumina required to produce 1 ton of aluminum in real 2006\$ terms.

Gross smelter margin





Base case model results w/PUD supplying 2 potlines of electricity

- Positive margins on average but high risk of a single year loss
- Economic margin relevant over longer time horizons. Business margins relevant for single year analysis.

	<u>Units</u>	<u>Average Year 2015-2025</u>			<u>Single Year 2015</u>		
		<u>2 Lines</u>	<u>3 Lines</u>	<u>4 Lines</u>	<u>2 Lines</u>	<u>3 Lines</u>	<u>4 Lines</u>
Smelter margin							
Net metal value	\$/t Al	1607.94	1607.94	1607.94	1627.51	1627.51	1627.51
Net alumina cost	\$/t Al	485.23	485.23	485.23	603.02	603.02	603.02
Wenatchee smelter margin	\$/t Al	1122.71	1122.71	1122.71	1024.49	1024.49	1024.49
Operating costs							
Power cost	\$/t Al	433.52	558.67	621.57	433.52	558.67	621.57
Total labor cost	\$/t Al	311.96	261.28	233.66	311.96	261.28	233.66
Other costs (materials/O&M/capital)	\$/t Al	285.00	278.00	270.00	285.00	278.00	270.00
Business contribution margin	\$/t Al	92.22	24.76	-2.52	-5.99	-73.46	-100.74
Economic contribution margin	\$/t Al	66.56	7.01	-16.30	-31.65	-91.21	-114.51



Base case model results w/PUD supplying 3 potlines of electricity

- Base case 3 potline scenario looks much better than 2 potline

	<u>Units</u>	<u>Average Year 2015-25</u>		<u>Single Year 2015</u>	
		<u>3 Lines</u>	<u>4 Lines</u>	<u>3 Lines</u>	<u>4 Lines</u>
Smelter margin					
Net metal value	\$/t Al	1607.94	1607.94	1627.51	1627.51
Net alumina cost	\$/t Al	485.23	485.23	603.02	603.02
Wenatchee smelter margin	\$/t Al	1122.71	1122.71	1024.49	1024.49
Operating costs					
Power cost	\$/t Al	435.27	525.79	435.27	525.79
Total labor cost	\$/t Al	261.28	233.66	261.28	233.66
Other costs (materials/O&M/capital)	\$/t Al	278.00	270.00	278.00	270.00
Business contribution margin	\$/t Al	148.15	93.26	49.94	-4.96
Economic contribution margin	\$/t Al	130.40	79.48	32.19	-18.74

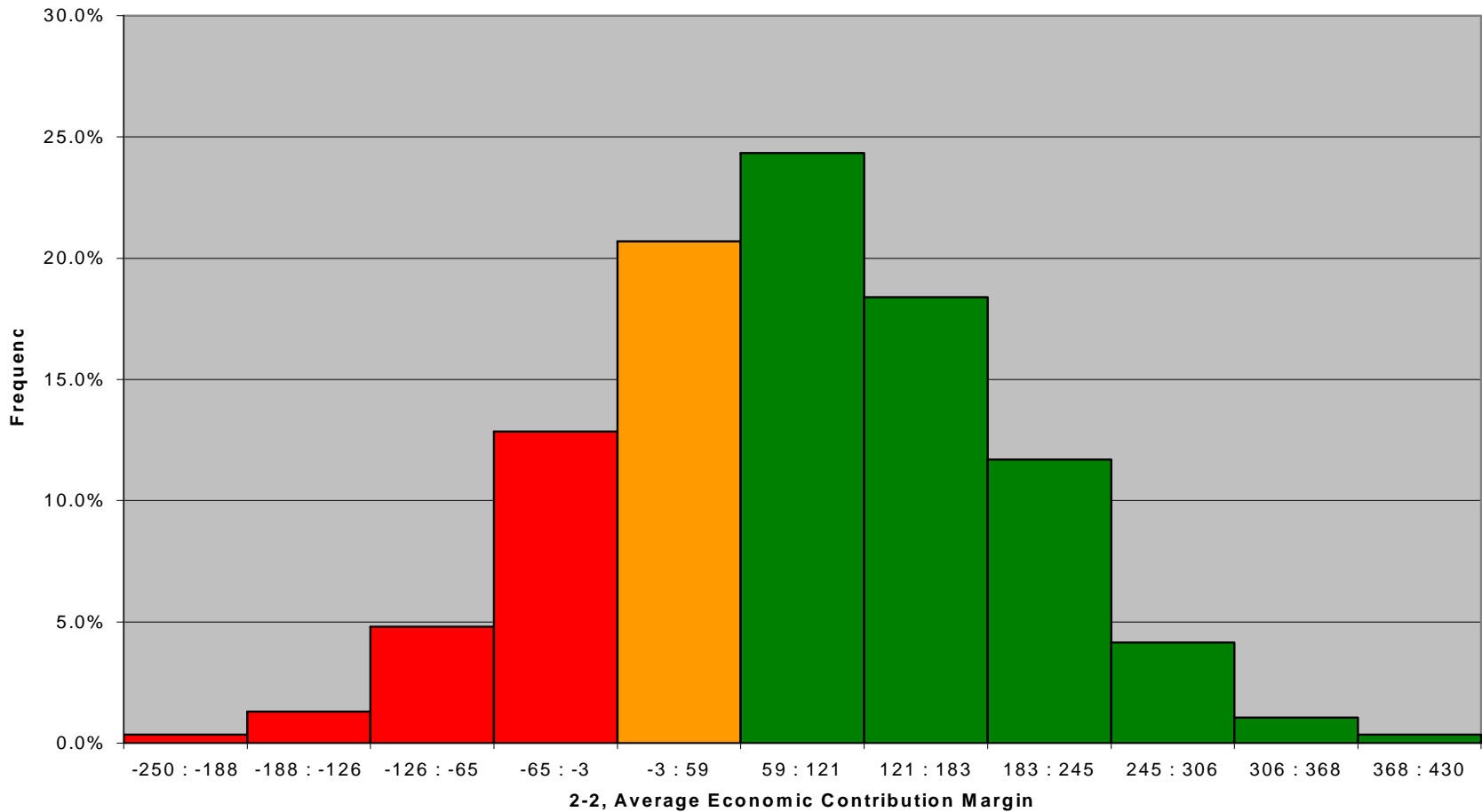
Base cases are useful starting points, but need to understand how uncertainty and risk factor in...

- Monte Carlo simulation provides a means of assigning probabilities to a range of possible outcomes, leading to a more insightful analysis
- The next 3 slides show the distribution of possible economic contribution margins under 2- and 3-potline operating scenarios
- Red – indicates scenarios with negative margins
- Orange – indicates scenarios with positive and negative margins
- Green – indicates scenarios with positive margins
- x-axis: margin ranges in \$/t of aluminum
- y-axis: frequency of a given outcome occurring



Average economic contribution margin, 2015-2025 – 2-line power, 2-line operation;

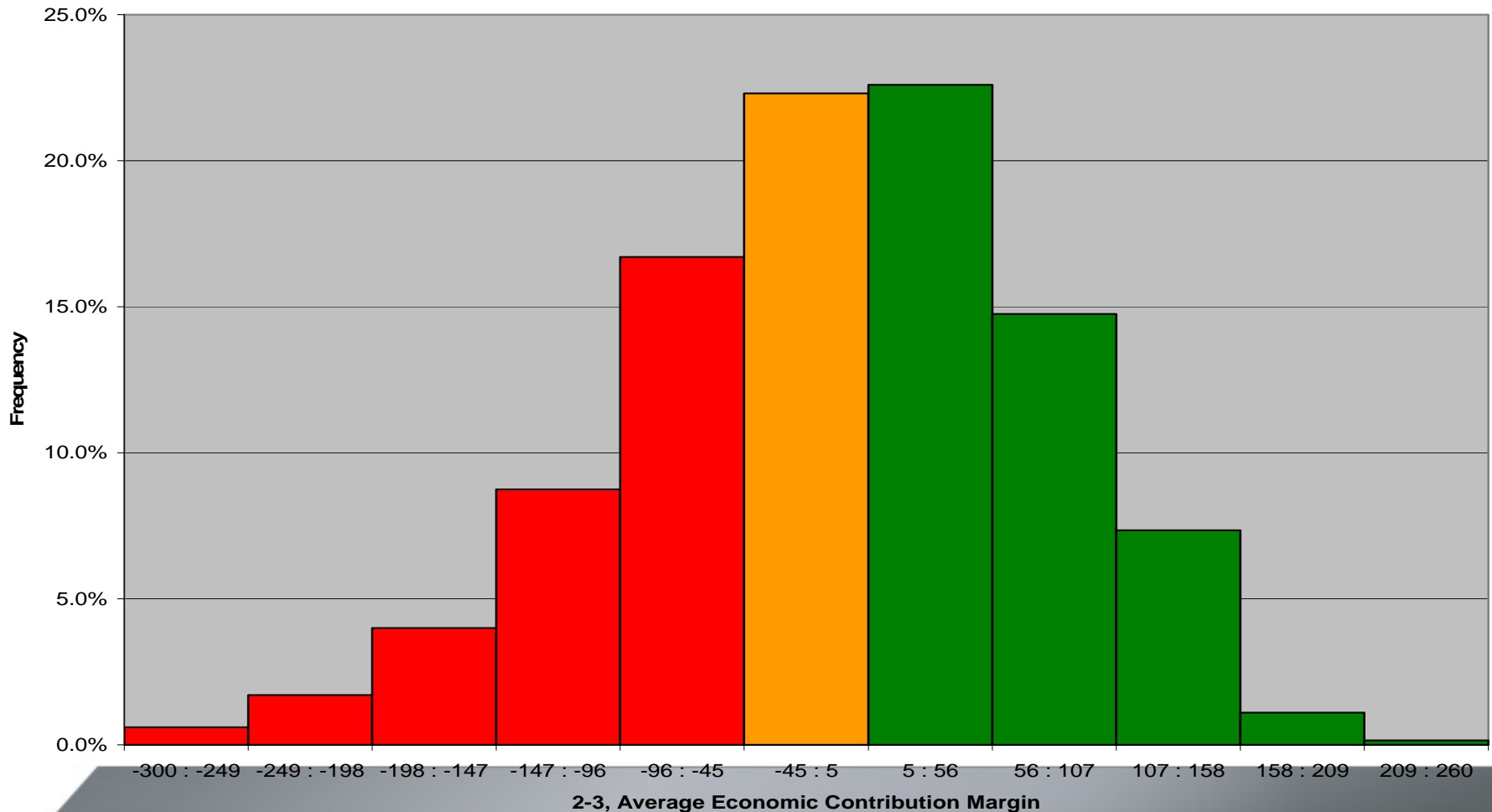
20% chance of negative cash flow





Average economic contribution margin, 2015-2025 – 2-line power, 3-line operation

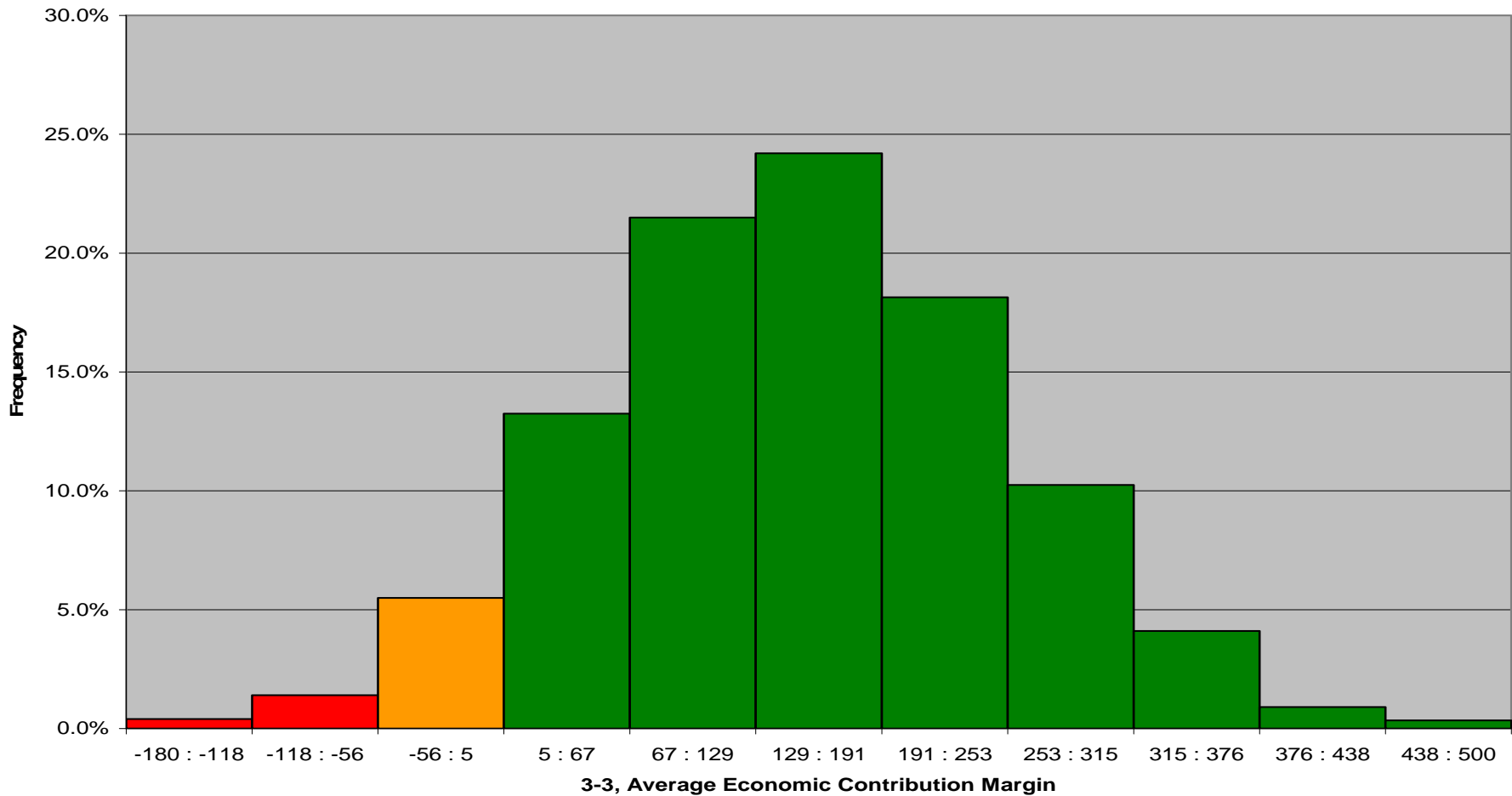
52% probability of negative cash flow





Average economic contribution margin, 2015-2025 – 3-line power, 3-line operation

7% probability of negative economic margins



How much risk is acceptable? Conclusions...

- CRU's experience is that companies like Alcoa are willing to take risks at the 90th percentile of the probability distribution in their core business. This means they might except a 10% probability of a negative economic contribution margin.
- 2-potline scenario:
 - at upper limit of acceptable risk and seems unattractive
- 3-potline scenario:
 - would likely result in Alcoa operating smelter on a sustained basis
 - puts Alcoa's downside risk at about 7%; an acceptable level
 - leaves open possibility for part-time operation of 4th potline



The Union's Perspective – Tim De Shazo & Jeff Campbell

- On behalf of the Wenatchee Aluminum Trades Council, we would like to thank the PUD staff and Commissioners for the opportunity at a contract that would keep the power and good Union jobs in the Valley.
- We are happy about the potential security this contract would give our younger Union brothers and sisters a chance at retirement with benefits in the future, that some of us are looking forward to now.
- The additional jobs that would be created by starting up another pot line would benefit both the Union and the Community.
- This Union has been making aluminum at Wenatchee Works for over 50 years, we have proved we are good at it and we want to continue doing so.
- Once again, on behalf of the Wenatchee Aluminum Trades Council ,
Thank You

What are the strategic initiatives for long term viability?

- **Behavioral Science Technology (BST)** facilitating safety culture change process and a holistic safety management system to drive for ZERO ACCIDENTS.
- **Integrated Asset Integrity Audit** where we are evaluating the long term capital and infrastructure needs of the plant.
- **Life Cycle Engineering (LCE)** assisting us to improve our predicative and preventative maintenance practices.
- **Total Productive Manufacturing (TPM)** is a process where operations and maintenance work together to improve productivity:
 - Increased reliability of equipment
 - Increase operational availability
 - Increased quality
 - More organized work areas





Where are the risks/areas of concern for Alcoa

- Contract Duration
- Capacity Exchange
- Operating Criteria
- Termination Fee
- Collateralization Requirements

- Seventeen-year contract (2011-2028) is acceptable
- However, any shorter duration presents difficulty for Alcoa
 - Impacts Economics
 - Reduced certainty
 - Shorter payback period for investment decisions
 - Employee recruitment/retention



Capacity Exchange

- Attempting to swap all or a portion of our 25% share of Rocky Reach and Rock Island capacity (250aMW with significant variation) to obtain a flat energy amount of (268 MW with little variation to match our steady power need)
- If no 3rd party Exchange Agreement 3 years from Contract execution, Alcoa share goes to 26% (add'l \$3.5 million reservation charge) and Chelan keeps capacity benefit (Alcoa cost of power to meet a 3 potline operation will increase)
- This is a matter of substantial risk for Alcoa. Without a new, favorable exchange agreement, we will not have enough power secured to operate 3 potlines without substantial exposure to high cost markets.
- Adding an additional 1% without a new exchange agreement will increase the cost of power to Alcoa
- Once we have defined the new contract, we will be able to discuss details of a new exchange agreement with other parties

- Alcoa cannot get the benefit of selling unused power unless we purchase more power and operate at higher levels
- Operating Criteria Formula for retaining Surplus Sales Credits

Term Sheet Operating Criteria	Implied Plant Operations	Treatment of Surplus Power Sales
Level 1: 250+MW	3 potlines (268MW)	100% of proceeds go to long term credit pool
Level 2: 215-250MW	2.5 potlines (226 MW)	50% to credit pool
Level 3: 175-215MW	2 potlines (185 MW)	30% to credit pool
Level 4: <175MW	< 1.9 potlines	0% to credit pool

- Chelan PUD has right, but not the obligation, to terminate the contract if Alcoa operates in Level 4 for 18 months
- Only if Chelan terminates, Alcoa's take-or-pay obligation ends

- Alcoa will not have the ability to reduce its power rate by reducing production as long as the Chelan PUD supply is adequate
- Credits from surplus sales accumulate against future supplemental power bills, not offset obligations to Chelan PUD
- Risk of CPUD costs being above market is minimal, but exists, and the consequences can be very large
- Alcoa cannot economically temporarily idle entire Wenatchee Works. In event of prolonged <2L operation where metal prices don't support plant costs + power costs, Alcoa could declare indefinite shutdown and trigger contract termination
 - Alcoa will remain liable to pay for project costs
 - Alcoa obligation will be met first by credits from market sales
 - If market sales revenues are inadequate, Alcoa will pay Chelan PUD the difference



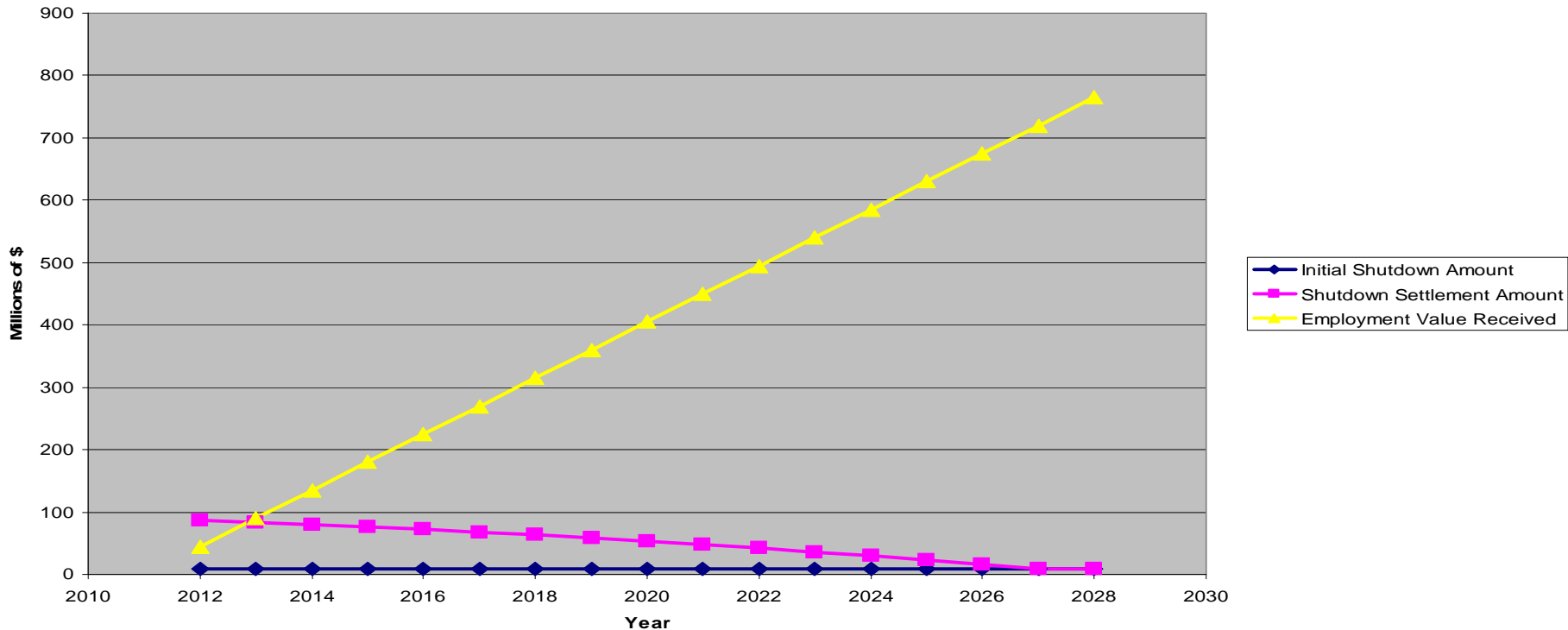
Termination Fee Basis

- Puget Sound Energy has made an \$89 million payment as a capacity reservation charge to Chelan PUD.
- The Proposal calls for Alcoa to make a \$17.5 million payment for a like amount of project output.
- The discount of \$71.5 million recognizes that Alcoa is expected to provide employment benefits that PSE will not.
- If Alcoa does not operate, and does not provide the expected employment for the term of the new contract, Alcoa will incur a closure penalty that is equivalent to this discount it received at the beginning of the contract.
- In the event of plant shutdown, Alcoa would guarantee that CPUD would continue to receive revenues for the cost of Alcoa's purchase, but those revenues would come first from surplus sales, and then, if necessary, directly from Alcoa.
- Although it is unlikely that Alcoa will have to terminate this contract, it has to view the termination fee as an additional risk in signing a new contract.

Early Termination Fee

- Assumes \$71.5MM deferred reservation, escalated by 6% until 2012
- Beginning principal balance of \$93MM that decreases each year of operation

Shutdown Payments





Collateralization Requirement

- CPUD requires collateral in event Alcoa's creditworthiness becomes unsatisfactory (below investment grade debt). Alcoa required to post collateral or LOC for:
 - 3 months of costs of generation
 - Shutdown settlement amount of the appropriate fiscal year in which downgrade occurs

- If Alcoa, Inc is involved in corporate development activities (M&A) that temporarily reduces its bond ratings, having to collateralize the shutdown payments will be a particular burden for the smelter, even though it is likely that Wenatchee Works would continue to operate and shutdown payments would be unlikely.
 - This is another area of risk from our perspective.



Why is this contract important to the Community?

- Designed to ensure aluminum production and associated economic benefits
 - Must use power at Wenatchee smelter
 - Strict Operating criteria and termination fee inhibit curtailment

- **Economic Impact of Alcoa**
- **Community Partnerships/Corporate Citizenship**



Why is this Contract Good for the Community?

- **Alcoa's Annual Economic Impact – Based on 3 potline operation (2006\$)**
 - **Local Spending - locally purchased goods & services, including contractors**
 - \$20 million
 - **Wages & benefits, based on 450 employees (per Conway study)**
 - \$43 million
 - **Indirect Spending & 'Spin-off jobs' (2.7x multiplier effect for employee salaries per Conway)**
 - \$116 million
 - **Local taxes, including property and sales & use taxes**
 - \$1.3 million
 - **Direct local contributions (Corporate gifts)**
 - \$150,000

Total = \$180 million per year x 17 years = \$3.1 billion



Why is this Contract Good for the Community?

- Alcoa employees continue to donate hundreds of hours of service to the community each year
- Alcoa currently sustains 3 major community projects:
 - **Solar Project**
 - Alcoa purchased and employees installed \$450,000 worth of solar panels for local schools and agencies
 - In 2006, revenues from these panels in partnership with CPUD SNAP program generated \$20,000 for Chelan schools & non profit agencies.
 - **Support our Troops**
 - To date, volunteer committee has raised \$50,000 and sent 1,178 packages to local service members overseas.
 - **Alcoa's Ridge to River Relay**
 - Premiere regional multi-sport race, community signature event and local fundraiser – Alcoa naming Sponsor through 2011



Why is this Contract Good for the Community?

- Our future is linked to the future of our communities. We are driven by the conviction that part of being the best company in the world is being the best company in our communities.

- Thus far in 2007 ALCOA has given approximately \$142,000 to the Wenatchee Valley through Alcoa Foundation grants and plant donations:
 - Disaster Relief to City of Wenatchee \$25,000
 - Erase Debt & Sponsor 2007 Season Performing Arts Center - \$15,000
 - Donated \$30,000 to City of Wenatchee for new city entrance sign
 - Special Olympics \$5,000
 - Habitat for Humanity - \$5,000
 - Chelan-Douglas Land Trust - \$10,000 Interpretive Conservation and Accessible Trail
 - Wenatchee Valley College \$21,000 Workforce Skill Development
 - Mustard Seed Neighborhood Center - \$8,000 Literacy Enhancement
 - Wenatchee River Salmon Festival - \$2,000 Sponsor Salmon Festival
 - Mike Utley Foundation - \$2,000 Dam2Dam Sponsorship
 - Miscellaneous Local Donation Requests - \$19,000



Why is this Contract Good for the PUD Customer/ Owners?

- **Risk Mitigation**
 - **Alcoa agrees to pay full costs of generation for 25% of hydro system**
 - **Alcoa faces production & market risks, not the ratepayers**

- **Hydro-system operation**

- **Economics**
 - **Short term**
 - **Long term**



Short Term: Capacity Reservation Charge & Change to Existing Contract

- PUD requires \$17.5 million (2006\$) up-front payment from Alcoa upon signing definitive agreement

- Chelan PUD's cash flow will likely be better if it wants to sell unused portion of 42 MW of system power for the next 5 years under the existing contract
 - At 2 potline production, we use ~17 MW on average
 - Sometimes we use all of the 42 MW
 - Sometimes we use none
 - The amount depends upon Rocky Reach generation
 - Chelan keeps incremental revenue from selling unused 25 MW at spot market prices, valued at \$26 million over the next 5 years
 - Alcoa has the right to use more of this power for incremental production, but we would have to purchase more market power at times
 - Alcoa will pay a \$7 MWh adder on Industrial Power over and above what is needed for two potlines – only applies if Wenatchee increases production between now-2011



Long Term: Comparison to CPUD Selling Surplus Power

- **Annual Benefit from Alcoa Contract is estimated at \$248 million/year**
 - Alcoa payments to Chelan PUD = \$48 million per year (estimated \$22/MWh x 2.2 million MWh).
 - Economic benefit from Alcoa = \$180 million per year
 - Total benefit is \$228 million plus the risk Alcoa assumes from Chelan PUD

- **Annual Benefit from selling an equal amount of surplus power is estimated at \$110 million/year (\$50/MWh x 2.2 million MWh)**

- **The Benefit of Alcoa contract to Chelan County is more than double the benefit of selling power at market**
 - Without considering the risk that Alcoa removes from Chelan by promising to pay for project costs even if no power is produced
 - Without considering the up-front payments Alcoa will make
 - Without considering concessions to our current contract



Summary

- This arrangement will work for Alcoa
 - We can afford to pay more than double our current power rate if we are operating 3 potlines
 - Without the additional production, the new “cost plus” terms will not work

- This arrangement maximizes the value of Chelan PUD hydroelectric resources and is twice as good for the people of Chelan County as selling electricity on the open market
 - \$228 million annually in economic impact from Alcoa vs \$110 million from selling power