

**Alaska Railbelt Electrical Grid Authority
Summary of Input Assumptions**

Input Assumptions to be Used in all Evaluation Scenarios

| Input Assumption | Description |
|--|---|
| General Economic Parameters (e.g., general inflation and escalation rates, etc.) | Regionalized, based on information provided by utilities |
| Utility-Specific Information | |
| Peak load and energy forecasts | Based on information provided by utilities |
| Existing generation plants (e.g., fuel, minimum and maximum capacity, heat rate, O&M costs, ramp rates, emission rates, retirement dates, etc.) | Based on information provided by utilities |
| Planned generation plants (e.g., fuel or technology, planned operational date, capacity costs, minimum and maximum capacity, heat rate (if applicable), O&M costs, ramp rates, emission rates, retirement dates, etc.) | Based on information provided by utilities and AEA, supplemented and modified (if necessary) by B&V experience |
| Existing and planned DSM/energy efficiency programs | Based on information provided by utilities; planned program information supplemented and modified (if necessary) by B&V experience |
| Emission limits | Based on information provided by utilities and supplemented by B&V |
| Fuel price projections | Regionalized, based on information provided by utilities. Differences between utilities to be based on actual differences such as ML&P's Beluga River gas, but not on things that should be the same such as projects of Henry Hub prices. |
| Unique system characteristics (e.g., must run reserves, transmission constraints, etc.) | Based on information provided by utilities and supplemented by B&V |
| Capital structure and cost of capital | Based on information provided by utilities. An attempt will be made to normalize the cost of capital. For instance the interest rates of municipal AAA rated bonds should be the same for everyone; however, not all of the Railbelt utilities have the same credit rating. |
| Transmission System | |
| Existing transmission system transfer capabilities | Based on information provided by utilities |
| Planned transmission system expansions | Based on information provided by utilities |
| Losses | Based on information provided by utilities |
| Outage rates | Based on information provided by utilities |
| Reliability Margins | Based on information provided by utilities. An attempt will be made to normalize reliability margins. For instance for instance if a utility maintains a higher reserve margin, its costs will be greater. The normalization will consider the need for different reserve margins for different utilities to reflect the utility's existing system. |
| Retirement Dates | Based on information provided by utilities |

Input Assumptions That Will Vary Based on Evaluation Scenario

| Input Assumption | Description | | | |
|--|--|--|---|---|
| | Scenario 1 - Environmental/ Renewables/ DSM/ Energy Efficiency Scenario | Scenario 2 - Continued Ample Supply of Natural Gas Scenario | Scenario 3 - Reduced Dependence on Natural Gas, Larger Fossil-Fueled Plants Scenario | Scenario 4 - Major Load Growth Due to Economic Development Activities Scenario |
| Peak Load and Energy Forecasts | Based on utility forecasts | Based on utility forecasts | Based on utility forecasts | Significant increase due to new large load (e.g., Pebble mine) |
| Retirement Dates for Existing Generation Facilities | Retirement at planned lives | Aggressive life extension of aging generation facilities | Retirement at planned lives | Retirement at planned lives |
| Planned Renewables | State establishes a Renewable Portfolio Standard and buys down portion of up-front costs | Based on information provided by utilities and AEA, modified (if necessary) by B&V experience | Based on information provided by utilities and AEA, modified (if necessary) by B&V experience | Based on information provided by utilities and AEA, modified (if necessary) by B&V experience |
| Planned DSM/Energy Efficiency Programs | State establishes DSM/Energy Efficiency Goals and a public benefits fund. | Based on information provided by utilities; planned program information modified (if necessary) by B&V experience | Based on information provided by utilities; planned program information modified (if necessary) by B&V experience | Based on information provided by utilities; planned program information modified (if necessary) by B&V experience |
| Future Fuel Supplies and Prices | New gas supplies limited; current gas supplies move to market prices as contracts expire | Ample new gas supplies from either Cook Inlet or North Slope, priced at a discount from market rates; current gas supplies move to a discount from market prices as contracts expire | New gas supplies limited; current gas supplies move to market prices as contracts expire | New gas supplies limited; current gas supplies move to market prices as contracts expire |
| Major Hydroelectric Plant | Revised Susitna project included (with revised cost estimate) with State financing and subsidies | Revised Susitna project included (with revised cost estimate) with State financing but no subsidies | Revised Susitna project included (with revised cost estimate) with State financing but no subsidies | Revised Susitna project included (with revised cost estimate) with State financing but no subsidies |
| Carbon Tax | High end of range | Low end of range of range | Low end to mid-point of range | Middle of range |