

OCS Data Request 1.7

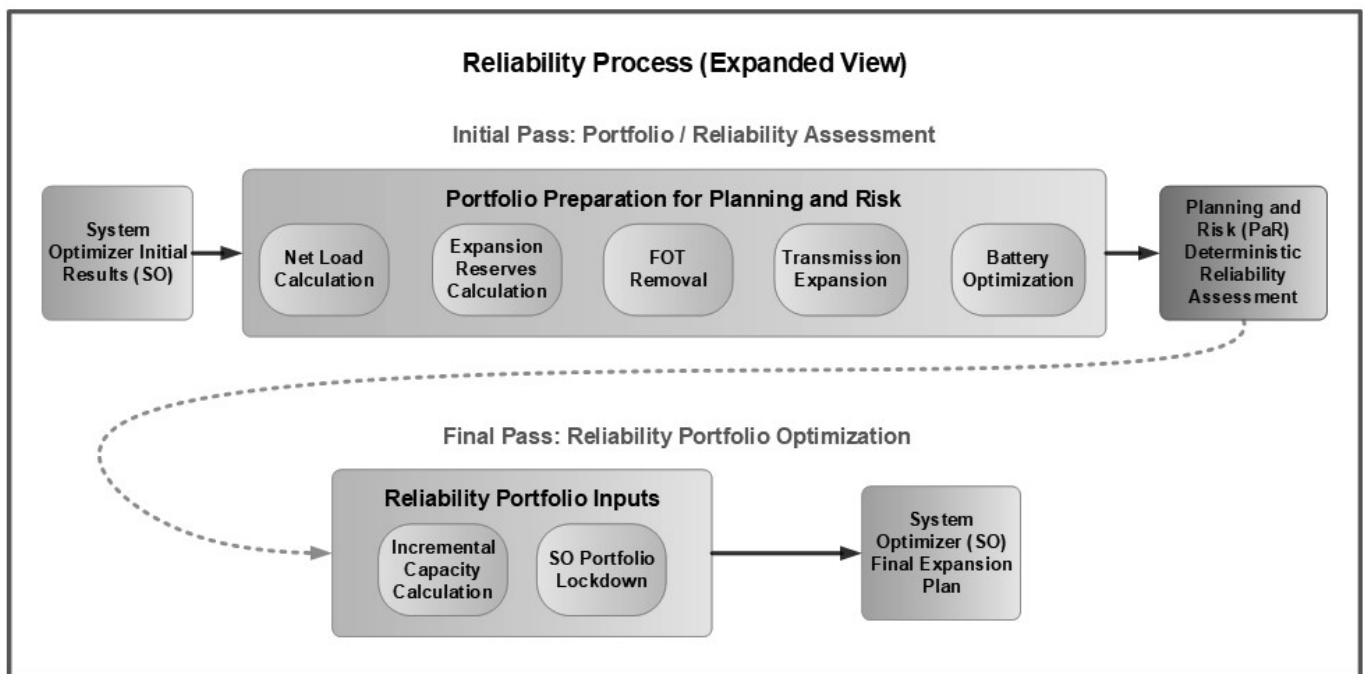
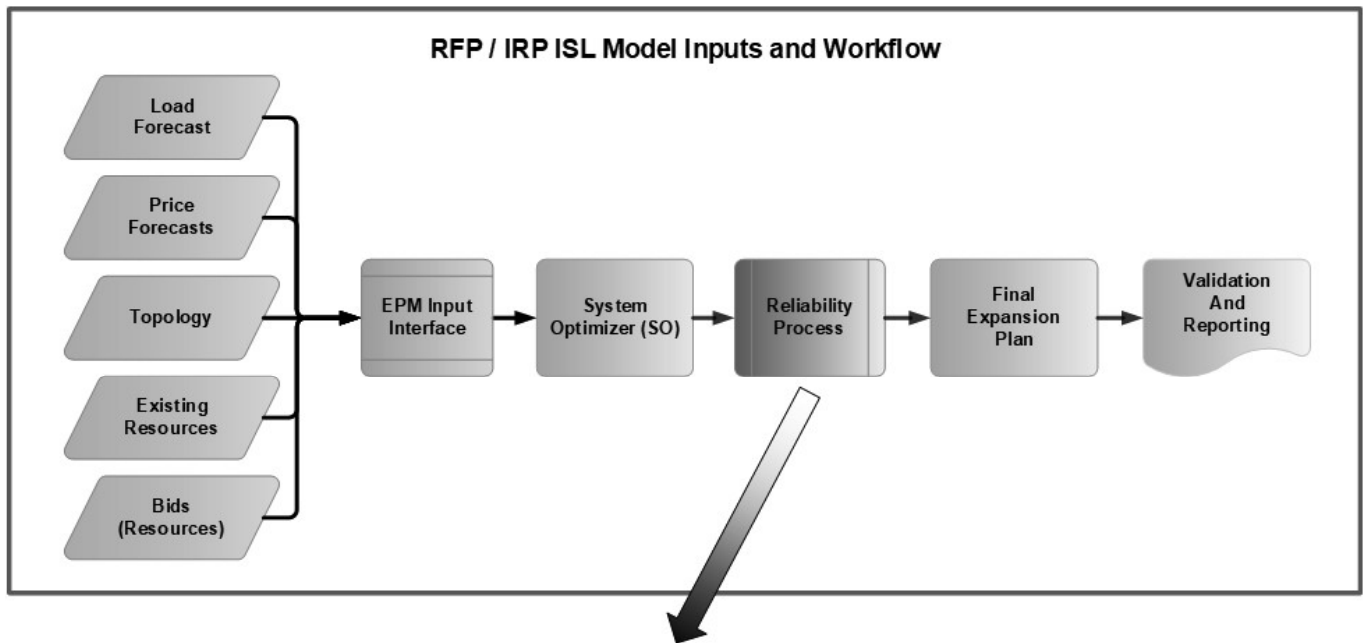
See page 23 of PacifiCorp's April 17, 2020 Oregon Stakeholder Workshop, regarding the Initial Short List (ISL).

- (a) Please provide an explanation of the steps that will be performed to conduct production cost modelling using the PaR model for the ISL.
- (b) Explain what terminal value is, and explain how it will be derived for the ISL.
- (c) For purposes of modeling to derive the ISL, explain the steps that will be required to account for resources of different lives, different amounts of capacity, and resources that start in different years. For example, will different expansion plans be created given that bids will have different amounts of capacity or will a single expansion plan be used? Please explain the modeling process in detail.

Response to OCS Data Request 1.7

- (a) The modeling steps used to generate the initial shortlist are the same as those used in PacifiCorp's 2019 Integrated Resource Plan (IRP) to perform least-cost expansion planning, as represented in the two figures below. In the Company's 2019 IRP, Volume I, Chapter 7 (Modeling and Portfolio Evaluation Approach) is devoted to describing the modeling process. The expanded steps in the second figure, describing the reliability process, are described in further detail in the 2019 IRP, Volume II, Appendix R (Coal Studies).

For the 2020 All Source Request for Proposals (2020AS RFP) initial shortlist determination, bids replace the availability of proxy resources (except for front office transactions (FOT) and demand-side management (DSM)) through year-end 2025. Also, as there is only one optimal combination of bid selections, the Planning and Risk (PaR) stochastic modeling is not used to make comparison among portfolios as in the 2019 IRP. PaR stochastics will be used for the final shortlist determinations where multiple portfolios are examined in differing price-policy scenarios.



(b) Non-power purchase agreement (PPA) new resources include a terminal value. Components of terminal value include: (1) development rights; (2) transmission assets (i.e., network upgrades); and (3) non-transmission infrastructure (i.e., roads). For each month starting from the commercial operation date (COD) of an asset, the remaining life of each component, after depreciation, is revalued at inflation. The terminal value of the project is the sum of the three components, after depreciation and revaluation, at the

retirement date of the generation asset.

- (c) A single optimal expansion plan will be developed to select the bids which will be promoted into the cluster study phase of the RFP. Consistent with the 2019 IRP, differing project capacities are inherently considered in the System Optimizer model (SO model) in terms of when and how much each resource contributes to meeting capacity requirements. Differing project lives and commercial online periods are also addressed in the same manner as in the 2019 IRP, described in Chapter 7 (Modeling and Portfolio Evaluation Approach), page 178:

“The SO model uses annual capital recovery factors to convert capital dollars into real levelized revenue requirement costs to address end-effects that arise with capital-intensive projects that have different lives and in-service dates. All capital costs evaluated in the IRP are converted to real levelized revenue requirement costs. Use of real levelized revenue requirement costs is an established and preferred methodology for analyzing capital-intensive resource decisions among resource alternatives that have unequal lives and/or when it is not feasible to capture operating costs and benefits over the entire life of any given resource. To achieve this, the real levelized revenue requirement method spreads the return of investment (book depreciation), return on investment (equity and debt), property taxes and income taxes over the life of the investment. The result is an annuity or annual payment that grows at inflation such that the PVRR is identical to the PVRR of the nominal annual requirement when using the same nominal discount rate. For the 2019 IRP, the PVRR is calculated inclusive of real levelized capital revenue requirement through the end of the 2038 planning period.”

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See page 27 of the Draft RFP document regarding the discussion of System Value Curves.

- (a) What will the study period be for the evaluation?
- (b) Please provide more details of the flat energy profile. Explain what the MW size will be, and when the Company says it will be flat, does that mean for every hour of the study period?
- (c) The Company states that it will develop system value curves. Explain the difference in how the different system value curves will be derived. How many different system value curves will be created, and what triggers the need for multiple system value curves? In other words, why not just one and how will the modeling runs be setup differently for the different system value curves?
- (d) Explain in detail the difference in modeling assumptions used to create the different system value curves for deriving hourly marginal system energy value versus deriving hourly marginal operating reserve value.

Response to OCS Data Request 1.9

- (a) The study period will be 2022 through 2038. The end date is consistent with the final year modeled in PacifiCorp's 2019 Integrated Resource Plan (IRP).
- (b) The Company intends to model a 50 megawatt (MW) energy profile in every hour of the study period.
- (c) A system value curve will be calculated for each transmission area in the IRP topology for which a bid is submitted. This will allow the model to calculate values consistent with the supply and constraints in each location. Because the intent is to estimate the value of all of the resource additions in a location, the size of preferred portfolio resources in the location being evaluated will be reduced by half to better represent the average energy value of resources in that location, rather than adding an additional 50 megawatts (MW) on top of all of the preferred portfolio resources in that location, absent this adjustment.
- (d) The operating reserve value will be developed in a manner analogous to the energy values. The operating reserve resource to be added will have a 50 MW of reserve capability in every hour. There are two operating reserve areas in the IRP models: East and West, so there will be two operating reserve credit streams.

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With regard to the GWS transmission project.

- (a) In the event that the Commission does not approve the GWS project, what would happen to the RFP-accepted bidders (i.e. projects) located in Eastern Wyoming? Please explain.
- (b) What will happen to bidders accepted in the RFP in the event that construction delays occur associated with GWS, or if GWS for whatever reason is cancelled after construction begins? Please explain.

Response to OCS Data Request 1.14

- (a) No contracts under the 2020 All Source Request for Proposals (2020AS RFP) will have been executed prior to the Public Service Commission of Utah's (UPSC) decision on Energy Gateway South (GWS). Should the UPSC not approve Energy Gateway South, PacifiCorp would not move forward those agreements impacted by Energy Gateway South. Bidders with projects in Eastern Wyoming can choose to participate or not in the 2020AS RFP, but with full understanding of this risk. PacifiCorp also has language in the RFP providing notice that it is not bound to accept any bids, and may cancel this solicitation at any time and at its own discretion.
- (b) Agreements negotiated with bidders will contain contingencies to address delays or cancellations. For example, a build-transfer agreement (BTA) would have off-ramp provisions or corrective measures negotiated into the agreement that tracked certain milestones achieved as Energy Gateway South is constructed. The BTA would also have provisions addressing delays or cancellations by the developer. Similarly, a power purchase agreement (PPA) would contain similar corrective measures and off-ramp provisions to address delays or cancellations whether attributed to PacifiCorp or the developer. Both the Cedar Springs PPA and Cedar Springs BTA, currently under construction as part of the Energy Vision 2020 (EV 2020) project, have these types of provisions.

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Bidder Q48 requested an explanation of why PacifiCorp is not allowing existing operating facilities to bid. The Company's answer was simply a repeat of what was known by the questioner that PacifiCorp is seeking incremental new resources. Please explain why it is necessary for PacifiCorp that it only acquire incremental new resources. For example, will incremental new resources be less expensive for customers once acquired by PacifiCorp? Also, please explain what attributes of incremental new resources are more desirable to PacifiCorp compared to existing operating facilities.

Response to OCS Data Request 1.17

Existing resources under contract with PacifiCorp are already modeled in the Integrated Resource Plan (IRP) and the preferred portfolio that resulted from this modeling effort represents new, incremental resources. The request for proposals (RFP) process, in turn, seeks a portfolio of resources that aligns with the preferred portfolio. In regards to the economics of new resources, the interconnection queue as of January 31, 2020 shows approximately 43,000 megawatts (MW) of interconnection requests or executed large generator interconnection agreements (LGIA) for new projects, thus a large population of highly competitive new projects could be available to bid into the 2020 All Source Request for Proposals (2020AS RFP).

New resources bring the next generation of technology, design, and control into the portfolio. PacifiCorp believes that, based on past RFP experience, it is unlikely there will be limited if any existing facilities that would otherwise be eligible to bid and would do so. PacifiCorp has allowed existing projects to bid in previous RFPs and would consider a similar approach in the 2020AS RFP if parties support it subject to the following conditions:

- Bidder cannot terminate an existing contract to bid into RFP.
- Contract with PacifiCorp will expire before the required on-line date.
- Bids must meet all other requirements in the 2020AS RFP.

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At each stage in the RFP process that the Company uses IRP models to evaluate bids, please explain if updated forecasts will be used (e.g. power price forecasts, gas price forecasts, load forecast, etc). What is the expected vintage of each of these forecasts for each stage of IRP modeling in the RFP evaluation?

Response to OCS Data Request 1.19

For the initial request for proposals (RFP) screening, major assumptions will be updated in the Integrated Resource Plan (IRP) models. The loads will be updated to the latest load forecast. The electric and natural gas prices will also be updated to the June 2020 price forecast.

For the final RFP screening, the electric and natural gas prices are anticipated to be updated to the March 2021 price forecast.