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August 7, 2018

MEMORANDUM

TO: Power Committee Members

FROM: Mike Starrett and Gillian Charles

SUBJECT: Resource Acquisition Trends and Current Utility Requests for

Proposals

BACKGROUND:

Presenters: Mike Starrett and Gillian Charles

Summary: Utilities within the region are currently contemplating the development of

more than 3,000 MW of new or re-powered generating resources. This is being driven by, 1) renewable portfolio standard (RPS) compliance, 2) resource adequacy needs, 3) opt-in "Green" customer programs for large commercial & industrial customers, and 4) the potential opportunity for new renewable resources to deliver energy at a lower cost than market and

thermal resources.

Staff will present an overview of current utility requests for proposals (RFPs) along with a description of several key resource development trends likely to continue through the timeline of the next Plan. Staff will also discuss the importance of access to long term firm transmission rights as a

barrier to some new resource development.

Relevance: Staff has previously shared updates resource costs and expected resource

retirements. This presentation will highlight some of the possible future acquisitions which may fill energy, capacity, and RPS compliance needs.

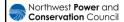
Work plan: Power division work plan, C.4. Update generating resources datasets and

tools.

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Resource Acquisition Trends and Current Utility Requests for Proposals

Mike Starrett & Gillian Charles
Power Committee
August 2018



Staff Goal

- Purpose: Describe key trends likely to continue through 2020's using a few current Utility RFPs
- Outline:
 - Scale of current acquisition activity
 - Description of several key trends
 - Summary of current RFPs to discuss how trends may impact specific regional procurements



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Regional Acquisition Activity

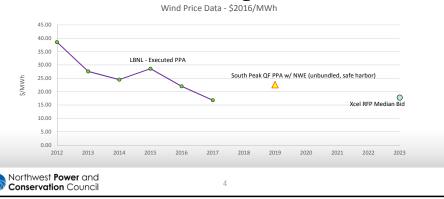
- Utilities within the region are currently contemplating the acquisition of more than 3,000 MW of new or re-powered resources
- Drivers include,
 - 1. RPS compliance
 - 2. Resource adequacy
 - 3. "Green" customer programs
 - 4. Potential for new renewables to deliver energy at a lower cost than market or existing thermal



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Trend 1: Energy from renewables is very cheap

 Trend 1: Undelivered/"bus bar" cost of energy from renewables can be at or below variable cost of existing thermal resources



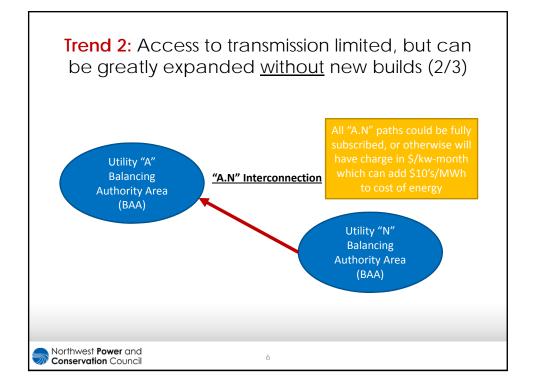
Trend 2: Access to transmission limited, but can be greatly expanded <u>without</u> new builds (1/3)

- Trend 2: Common for BA-to-BA interfaces and key paths to be fully subscribed on long-term firm basis
 - Fully subscribed does <u>not</u> mean lines are fully physically utilized
- While transmission may physically be available, commercial offerings from transmission owners to increase utilization are limited and not always financeable

financeable

38 Western Balancing Areas

Northwest Power and
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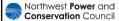
Trend 2: Access to transmission limited, but can be greatly expanded <u>without</u> new builds (3/3)

- Many paths forward, including conditional firm at the interties, a modified conditional firm offering, market expansion, or other strategies
- Bonus: A structure where transmission was more fully utilized could also help alleviate congestion by creating pricing signal to reflect real-time path constraints



Trend 3: Corporate Procurement Way Up, including through Utility Tariffs (1/3)

- Trend 3: Utility programs to develop renewables for large C&I customers growing
 - Examples: Avista Solar Select, or PacifiCorp Blue Sky
- Can be a path for customers to stay in utility tariff and still develop new, additional renewables



Trend 3: Corporate Procurement Way Up, including through Utility Tariffs (2/3)

• **Example:** Large customer "F" would like to reach 100% renewable energy with new renewables (not RECs from existing projects)

Recently companies have "turned to the utility and said, 'Here, hold my beer. I got this.'" – Head of energy strategies at Microsoft, 2018





Stay in existing utility tariff

Also participate in Green program



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Trend 3: Corporate Procurement Way Up, including through Utility Tariffs (2/3)

- If customer chooses to stay in tariff, one possible arrangement could be:
 - Project is in utility portfolio, energy belongs to utility
 - RECs go to specific participating customer and are priced to close avoided cost gap
 - Utility must still include energy sales to customer when determining RPS compliance need



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Utility RFPs for Portfolio Resources

	Utility	Size	Designation
	Avista	50 MWa (~150 MW) of renewables	Least cost energy
	PacifiCorp	~1,300 MW of new wind and ~1000 MW of repowered wind	Least cost energy, RPS compliance
	Portland General Electric	100 MWa (~300 MW) of renewables by 2021	RPS compliance
	Puget Sound Energy	(1) Demand Response, and(2) Capacity andRenewables	Resource Adequacy, RPS
Northwest Power and Conservation Council			

Utility RFPs for Customer Programs

Utility	Size	Designation
Avista	28 MW (DC) solar	Solar Select Green Tarif
PacifiCorp	437 MW of Solar	"Blue Sky Select" tariff, Section 272

Northwest **Power** and **Conservation** Council

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