Update on Council's Regional Hydropower Potential Scoping Study

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Background

March 2012 – Information gathering session
September 2013 – GRAC Hydropower subgroup meeting
June 2014 – Presentation to Power Committee on staff proposal for study
July/August 2014 – Release of RFP and selection of contractor
August ➔ November 2014 – Study duration
November 2014 – GRAC hydropower mtg
December 2014 – Council Meeting
Questions Asked

- Can a reasonable physical potential of energy and capacity be drawn for the PNW from the existing studies?
  - Does this potential integrate the Protected Areas?
- Is there enough information available to apply cost assumptions to the technical potential?
- If a supply curve (potential and cost) cannot be derived, what approach is recommended as a potential next step?
Council’s Intent

- How does this inform our analysis and the development of the draft Seventh Power Plan?

- Council staff issued a memo describing objective of report
  - Report will be **one** of the resources used in our analysis of hydropower potential for the Plan
  - Report is not a direct input into the Plan
    - Further analysis is needed to digest results and decide what next steps of analysis need to be performed
Only 12% of potential identified in DOE study (>1MW) not in protected areas

- PNW Potential: 25,226 MW
  - > 1 MW: 15,996 MW
    - In Protected Areas: 14,006 MW
    - Outside Protected Areas: 1,990 MW
  - < 1 MW: 9,230 MW
“Realistic, Reasonable” Hydropower Potential (2015-2035)

<table>
<thead>
<tr>
<th>Category</th>
<th>Capacity (MW)</th>
<th>Energy (MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-powered Dams</td>
<td>57</td>
<td>148,248</td>
</tr>
<tr>
<td>Conduit and Hydrokinetic</td>
<td>64</td>
<td>226,107</td>
</tr>
<tr>
<td>Pumped Storage</td>
<td>2,640</td>
<td>33,084</td>
</tr>
<tr>
<td>General Assessments</td>
<td>90</td>
<td>429,947</td>
</tr>
<tr>
<td>Upgrades to Existing Projects</td>
<td>388</td>
<td>1,461,168</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>3,239</strong></td>
<td><strong>2,298,554</strong></td>
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The contractor did not include any of the potential identified in the US DOE study as realistic and reasonable because it is not site-specific and requires further analysis.
Next Steps

- Staff proposal: Analyze hydropower as a secondary resource
  - Does not appear to be enough potential for inclusion in the RPM, but enough for a resource analysis of cost and potential for inclusion in the Seventh Power Plan
- Analyze pumped storage potential in more detail for Seventh Power Plan
  - GRAC discussion planned for future meeting
For More Information…

See [http://www.nw councils.org/energy/grac/hydro/](http://www.nw councils.org/energy/grac/hydro/) for:

- Final NWHA report to the Council
- NWHA presentation to GRAC
- Council staff memo on intent of study
- Council staff presentation to Council (Dec 2014)
- And more background