Topics

» Current status update on approved funding
» Conclusions thus far
» Recommended path forward
### SUMMARY

**Funding Already Approved**

<table>
<thead>
<tr>
<th>PROJECT 1</th>
<th>2015-2016 PPB</th>
<th>2017 PPB</th>
<th>2018 PPB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Analytics Platform</td>
<td>$200,000</td>
<td></td>
<td></td>
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<tr>
<td>PROJECT 2</td>
<td></td>
<td></td>
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<tr>
<td>Sensor Technology</td>
<td></td>
<td>$50,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Development</td>
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<tr>
<td>PROJECT 3</td>
<td></td>
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<tr>
<td>RR Turbine - Generator</td>
<td></td>
<td>$250,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Model</td>
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<tr>
<td><strong>Total Approved</strong></td>
<td>$250,000</td>
<td>$250,000</td>
<td>$250,000</td>
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<td><strong>Total Spent as of Feb 2018</strong></td>
<td>$202,700</td>
<td>$190,650</td>
<td>$0</td>
</tr>
</tbody>
</table>
Conclusions Thus Far

The concept of aggregating data is valuable

Others are willing to contribute funds

There is an interest in this concept from:

» Hydropower owners

» Manufacturers

» National Labs

» Colleges and Universities

There is an interest regionally in research collaboration between Agriculture, Hydropower, Healthcare, and Technology industries
Hydropower Research Institute

Hydropower Research Institute Members

Utilities and Generation Asset Owners

Contribute operational data

Access to aggregated data
Access to untransformed data

Hydropower Research Institute Subscribers

Data access by permission/fee

Education Institutions
- Conduct research
- Develop intellectual property

Research Partners
- Conduct research
- Develop intellectual property

Vendor Partners
- Warranty monitoring
- Performance monitoring
- Research & Development

Private Companies
- Sensor performance
- Sensor development

Data Access by permission/fee

Aggregated Data Storage

Dashboard

Data Visualization

Data Access by Permission/fee (Access to data for vendor-specific assets)
Potential Application

Reduce forced outages

Benchmarking

Improve O&M practices

Improve predictive capabilities

Perform research

Develop new sensors and monitoring equipment

Improve quality and contract terms
Recommended next steps

1. Incorporate Institute as a nonprofit corporation in Chelan County

2. Develop articles of incorporation, by-laws, operation plan, and select contract operator between now and August

3. Reallocate $200,000 from sensor technology development to the Institute formation. Allocate an additional $300,000 from unallocated PPB funds for the incorporation effort and begin contract operations.

4. Solicit additional hydropower owner membership and subscribers

5. Begin aggregating operational data by the end of the year with US Army Corps of Engineers and Southern Company
QUESTIONS?