Incident Review—Melba Battery Fire

Presentation to Canyon County

October 18, 2023

Topics to Cover

- [x] Melba Incident Review
- [x] Air Quality Testing Results
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- [x] Inspection & Remediation
- [x] Other Lessons Learned
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Introductions

- Megan Ronk, Economic Development & Innovations Director
- Eric Hackett, Projects & Design Senior Manager
- Bill Norris, Environmental Compliance Manager
- Angelique Rood, Regional Manager

Melba Incident Review

- The fire was reported to Idaho Power at 5:20 a.m., Monday Oct. 2
- Idaho Power arrived on-site at 6:02 a.m.
- Neighbors were encouraged to evacuate, hotels offered
- Fire responders reported on-site, no action needed
- Roads were closed to maintain a 200 ft perimeter
- Regular updates to fire, city, and county throughout event
- Industrial Hygiene Professionals arrived to begin air quality testing at approximately 11:00 a.m.
  - National firm with mobile instrumentation arrived Tuesday, Oct. 3

☑ Air Quality Testing Results

- 3rd party real-time air monitoring
  - Immediate monitoring conducted afternoon and evening of Oct. 2
  - Continuous monitoring performed evening of Oct. 3–Oct. 5 (duration of fire)
  - Analyte selection: vendor material information and common contaminants from fires
  - Sampling locations based on nearby residential dwellings and prevailing winds

No detected analytes above health-based action levels

Fire Response & Investigation

- Idaho Power and battery supplier monitored 24x7 until fire was extinguished
- Advised by battery supplier to not add water or retardant, consistent with current industry practices

Fire Response & Investigation

- Comprehensive investigation at Melba
  - Battery supplier believes the root cause to be water intrusion
  - Short-circuit caused heat that ignited the battery cells
  - Fire spread between battery segments until it burned out
- Supplier believes that an identified defective unit is where the fire originated due to water intrusion
- Idaho Power third-party experts engaged to provide independent conclusions and recommend appropriate mitigation measures
- Developing plans for removal

Inspection & Remediation

- Melba incident has emphasized heightened need and awareness for inspection and remediation across Idaho Power battery systems
  - Meet specifications, codes, and testing ratings
  - Ensure safe operation
  - Ensure emergency response clarity
- Complete inspection of all battery systems with supplier and independent third-party
  - Water intrusion
  - Defects
  - Mitigation measures and success

Inspection & Remediation

- Determine appropriate mitigation strategies
  - Resolve water intrusion
  - Reduce propagation between battery segments
- Consult with third-party experts to ensure ongoing safe operation
- Develop additional procedures, processes, inspection protocols, and contingency plans
- Complete rigorous technical and engineering diligence and specification review of future suppliers

Other Lessons Learned

- Improved coordination with stakeholders **prior** to battery installation is necessary
  - Training with public safety partners
  - Better communication with city and county officials

- Idaho Power staff to be better equipped with information on battery units to aid in communication and information sharing
- Previous work with Canyon County aided in cooperation during the event
  - Messaging was timely, coordinated, and accurate

Other Lessons Learned

- Operational experience
  - Establish subject expertise
  - Mitigation strategies
  - Contingency planning
  - Emergency response

Current & Future Battery Storage Needs

- Growth info
  - Capacity needs- 23% customer growth in Canyon County (2018-2023)
- Why Melba specifically
  - Steady load growth
  - Batteries supports local peak demand and help meet system needs
  - Affordable and reliable
  - Local resiliency benefits
- Other Canyon County installations
  - Happy Valley Substation (Nampa)

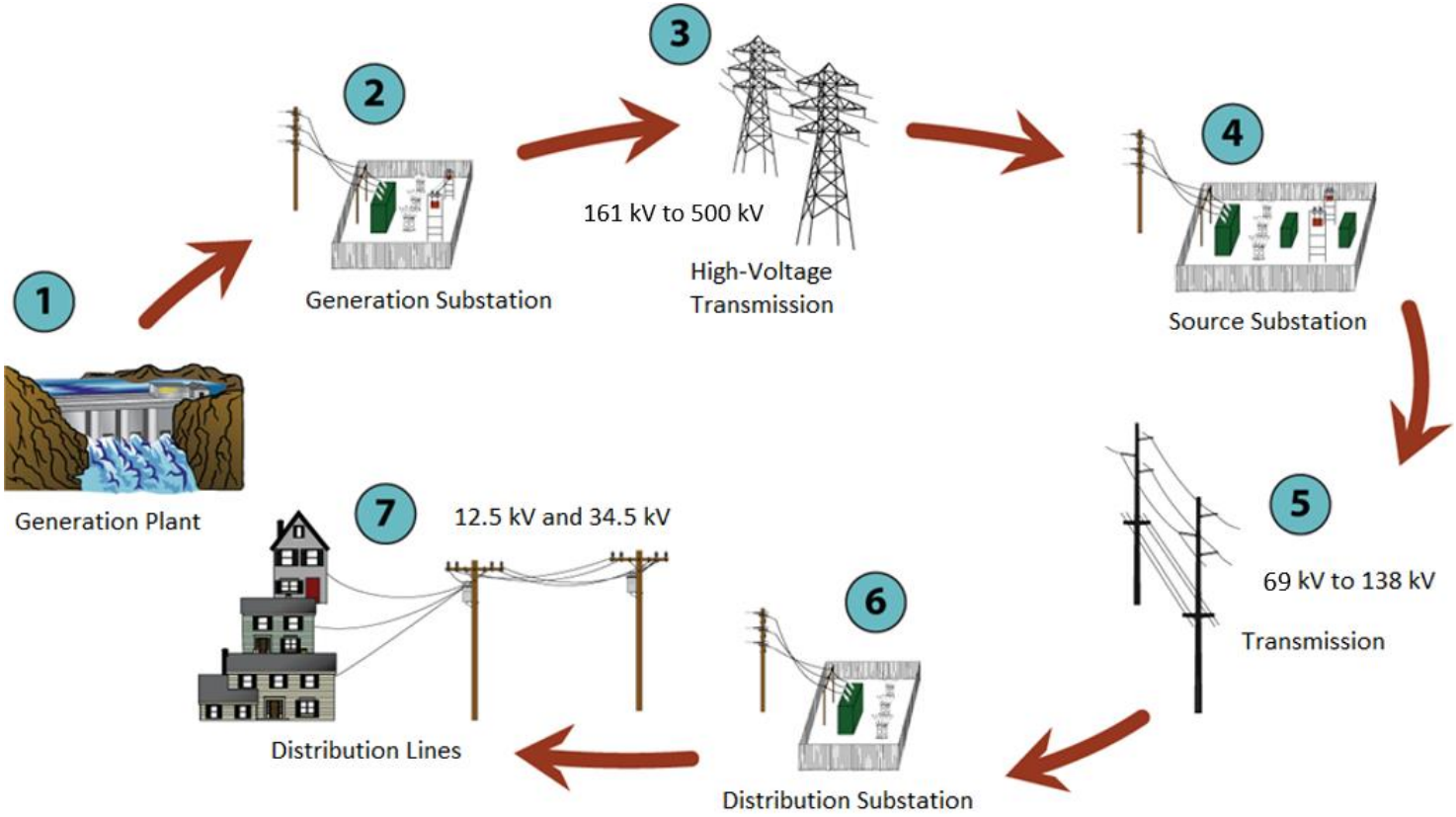
Melba Project Timeline

- Need identified in spring 2021
  - Transformer overload given sustained growth in Melba
  - 2-MW four-hour battery storage system
  - Defer transformer upgrade by 10+ years
- Supplier solicitation, review, and contract through the end of 2021
  - Numerous suppliers evaluated based on specification, timeline, and cost

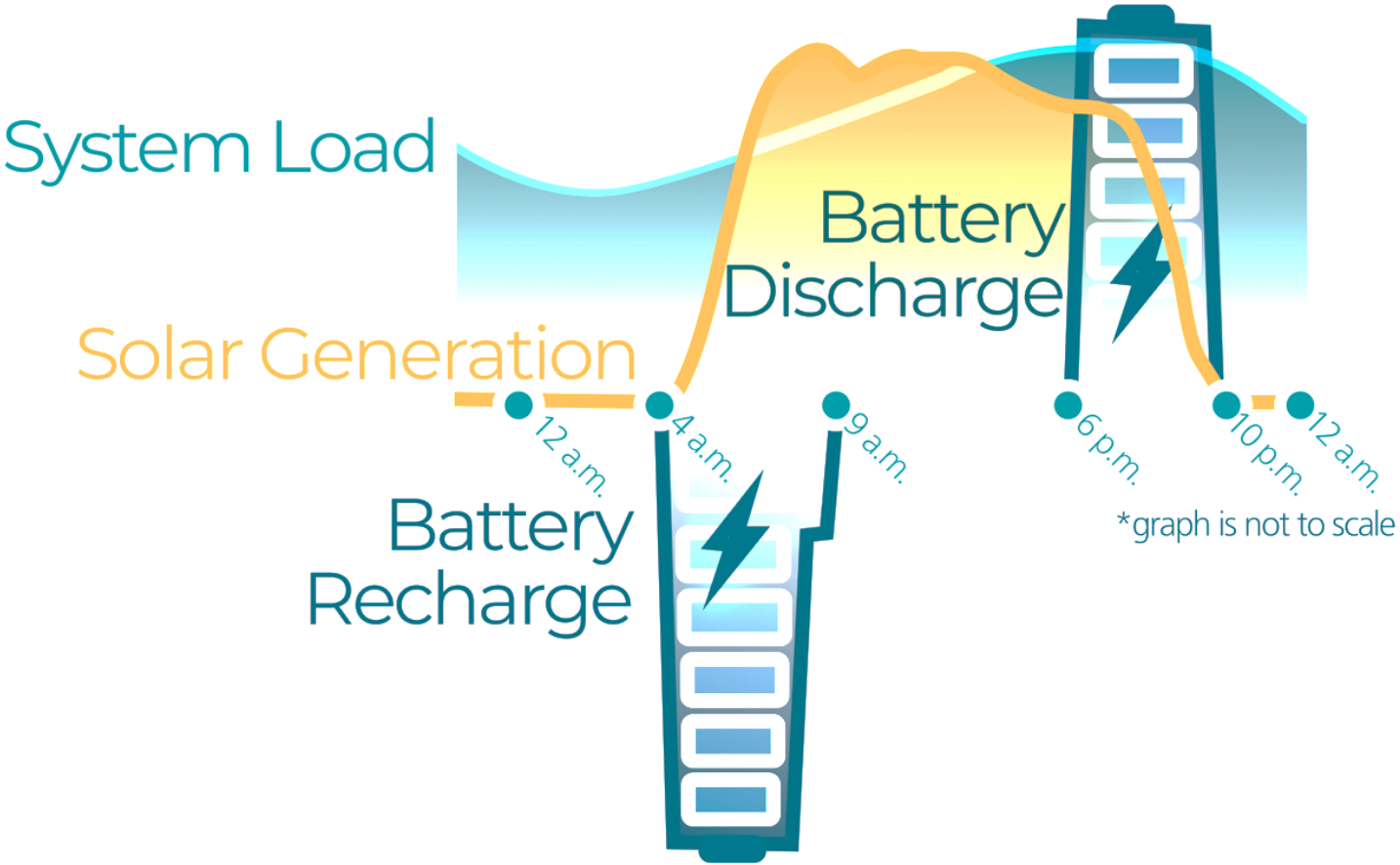
Melba Project Timeline

- Batteries were delivered/installed in summer 2023
- Testing/commissioning began in September 2023
  - Control electronics, monitoring equipment, auxiliary power, fire suppression system, HVAC
- Expected to be fully operational in early October

Our Electric Grid



How Batteries Can Help



The Future of Battery Storage

- Industry is advancing technology, including safe operations
  - Worldwide, batteries are generally proven and safe
  - Supplier/industry expertise
  - Battery experts
  - Community collaboration
- Affordable and reliable
  - Anticipated in Idaho Power Integrated Resource Plan
- Provide ability to store energy to meet customer needs at any time
  - Potential to support economic development and meet timelines
  - Support local needs as well as system benefits

Questions