1. Discuss what Integrated Resource Planning ("IRP") is and what it aims to achieve

2. Review the 2019-2020 IRP process and timeline

3. Identify key issues that SVCE staff must address in order to prepare SVCE’s 2020 IRP

4. Gather Board feedback on proposals

5. Preview next steps
## Issues for Discussion Today

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<th>2. RPS Resources</th>
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- **Definition**
- **Process and Timeline**
- **Key Questions**
- **Issue Discussion**
- **Next Steps**
What is IRP: The Planning Perspective

Out of all available resource types and quantities, what is the optimal mix of resources for achieving our institutional goals?
Basic Components of an IRP

Inputs

• Need, i.e. forecasted demand
• Existing contracts and resource commitments
• Future procurement constraints
• Characteristics and availability of resource options for filling net open position

Outputs

• Preferred mix of resources to pursue in future procurement activities
• Depending on techniques used, estimates of cost, GHG impact, and/or other characteristics of hypothetical portfolio scenarios
What is IRP: The Regulatory Perspective

If all LSEs procure resources according to their respective priorities, what does the resulting system-wide portfolio look like? Does it achieve our system-wide policy goals?
SVCE IRP Checkpoints

Staff prepare the IRP and submit it to the Board

The Board approves the IRP, allowing submission to the CPUC

The CPUC certifies the IRP, and provides information on system-wide outcomes that impacts development of future IRPs

April 1, 2020
The Energy Landscape has Changed Since SVCE Launched

“Reliability and cost considerations are coequal goals with the GHG emissions goals in IRP, and are integral to a successful IRP.”

“Renewable and storage resources alone are not sufficient, at present, ... to provide enough renewable integration services to result in electric system reliability at the system level.”
Major Areas for Consideration

### Load Forecast

### Carbon-Free Resources

### RPS Resources

**SVCE Preferred Portfolio Long- and Short-Term Contracting Estimates, 2021-2030**

- **Definition of “Carbon-Free”**
- **Reliability**

**Timeline and Key Questions**

**Next Steps**
## Issues for Discussion Today

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1. Carbon-Free Resources: Hydro, Nuclear and Carbon-Free Allocations

- **2018 IRP:** Pacific Northwest (“PNW”) large hydro comprised the entirety of SVCE’s non-RPS portfolio

- **2020 IRP Staff Proposal:**
  - Continue to pursue large hydroelectric resources both in-state and from PNW
  - Consider use of carbon-free options including allocation of nuclear (through 2025) and carbon offsets
2. a. RPS Resources: Percentage

- **2018 IRP:** RPS-eligible resources maintained at 50% of SVCE resource portfolio through 2030

- **2020 IRP Staff Proposal:**
  - **2.a.** Maintain RPS-eligible resources at 50% of portfolio through 2025 and increase to 60% by 2030 to match State requirement
2.a. RPS Resources: Percentage

State RPS Procurement % Requirements

- SB 100 requirements
- SB 350 requirements (prior to 2019)
- Long-Term Contracting requirement

*Beginning in 2021, 65% of RPS requirements must be procured from contracts ≥ 10 years.
2.b. RPS Resources: Technologies

➢ **2018 IRP:** After expiration of existing short-term contracts, planned RPS procurement included only wind and solar. Biomass and geothermal excluded at Board suggestion.

➢ **2020 IRP Staff Proposal:**

➢ **2.b.** Match CEC-eligible renewables including: small hydro, biomass, binary geothermal, conventional geothermal and biomethane in addition to wind and solar
2c. RPS Resources: New & Long-Term vs Existing & Short-Term Contracts

- **2018 IRP:** Conservative approach of minimum amount of long-term (10+ years) contracting required to achieve compliance with state requirements, with remainder of open position filled with short-term contracting.

- **2020 IRP Staff Proposal:**
  - 2.c. Pursue 40% RPS from new and long-term renewables by 2023 and balance via existing and short-term resources.
Summary of 2020 IRP Staff Proposals

➢ Carbon-Free Resources:
  • Continue to pursue large hydroelectric resources both in-state and from PNW.
  • Consider use of carbon-free options including allocation of nuclear (through 2025) and carbon offsets

➢ RPS Resources:
  • Maintain RPS-eligible resources at 50% of portfolio through 2025 and increase to 60% by 2030 to match State requirement
  • Match CEC-eligible renewables including: small hydro, biomass, binary geothermal, conventional geothermal and biomethane in addition to wind and solar
  • Pursue 40% RPS from new and long-term renewables by 2023 and balance via existing and short-term resources
Next Steps

➢ Board members interested in further discussion of any of these topics are encouraged to contract SVCE staff for **individual meetings**

➢ A **second workshop or agenda item** will be scheduled in October to review refined versions of these proposals and discuss further issues

➢ Fall 2019 will focus on modeling and developing portfolio scenarios

➢ Goal is to bring draft IRP to Board for review in early 2020
Thank You