

Future Grid Study Kickoff Workshop for the High DER Grid Planning Proceeding

Energy Division

May 3, 2022



California Public
Utilities Commission

We Anticipate a High-Penetration DER Future

“This OIR anticipates a high-penetration DER future and seeks to determine how to optimize the integration of millions of DERs within the distribution grid while ensuring affordable rates.”

– High DER OIR at p. 9

“This OIR neither seeks to set policy on the overall number of DERs nor does it seek to increase or decrease the desired level of DERs. This OIR focuses on preparing the grid to accommodate what is expected to be a high DER future and capture as much value as possible from DERs as well as mitigate any unintended negative impacts.”

– High DER OIR at p. 10

Overview of High DER Grid Planning Proceeding (R.21-06-017)

The proceeding will:

- Address unresolved and ongoing issues from the Distribution Resources Plans proceeding (R.14-08-013) and Integrated Distributed Energy Resources (IDER) proceeding (R.14-10-003)
 - Note: Unresolved issues associated with the IDER Avoided Cost Calculator are expected to be scoped into a separate proceeding.

In addition, the proceeding intends to:

- Enable swift evolution of grid capabilities and operations to integrate solar, storage, electric vehicle/electric vehicle supply equipment and other DERs to meet the State's 100 percent clean energy goals;
- Improve distribution planning, including charging infrastructure forecasting to support cost effective and widespread TE; and
- Optimize grid infrastructure investments by facilitating community input about planned developments, DER siting plans, and resiliency needs.

Organized Under Three Tracks

1

Distribution Planning Process and Data Improvements

- *Phase 1:* Near-Term Actions
- *Phase 2:* Distribution Planning Process Improvements

Topics:

- IOU Distribution Planning Processes
- Electrification Impacts
- Data Sharing and Transparency (Data Portals/Integration Capacity Analysis Data)
- Community engagement

2

Distribution System Operator (DSO) Roles and Responsibilities

- Long-term grid vision
- Investigation of DSO models
- Consideration of IOU performance/ incentive mechanisms

3

Smart Inverter Operationalization and Grid Modernization Planning

- *Phase 1:* Smart Inverter Operationalization
- *Phase 2:* Grid Modernization Planning and Cost Recovery

Topics:

- Business Use Cases for Smart Inverters
- DER Dispatchability
- Smart Grid Investment Planning

Track 2: Distribution System Operator Roles and Responsibilities

- Focuses on high-level policy issues involving distribution system operator roles and responsibilities as well as IOU and aggregator business models.
- Addresses long-term policy issues and could result in findings that implicate potential action beyond the timeframe of this proceeding.
- A robust stakeholder process leading to the completion of a technical report is the primary staff-supported process scoped for this track.

Track 2: Scoping Questions

1. How do alternative DSO models compare in their ability to plan and operate a high DER grid, unlock economic opportunities for DERs to provide grid services, limit market power, reduce ratepayer costs, increase equity, support grid resiliency, and meet State policy objectives?
2. Should the Utilities be incentivized to cost-effectively prepare for widespread DER deployments? If so, how?

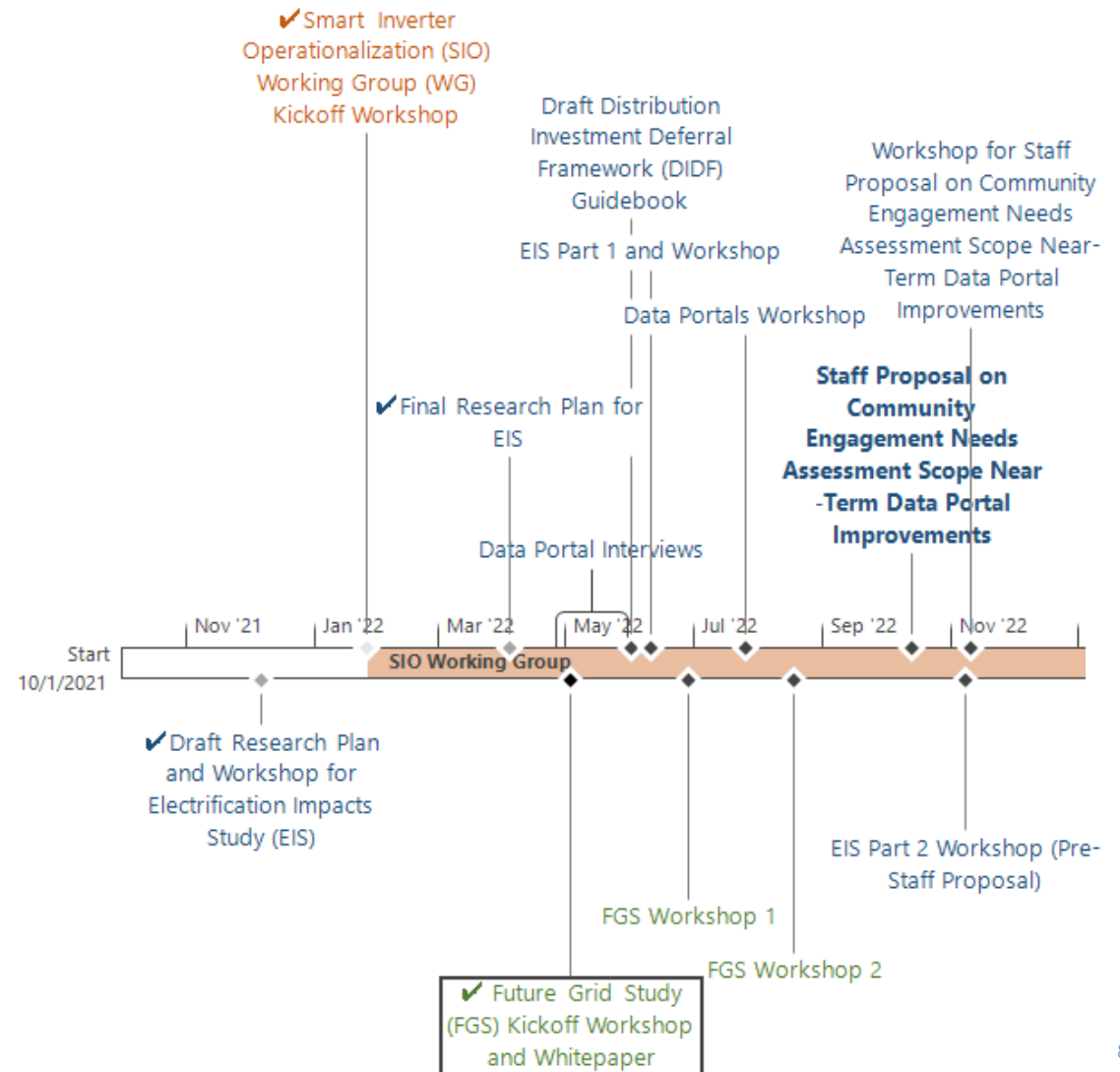
Work Plan Update

Future Grid/DSO Study Activities, Three
Proceeding Tracks

Work Plan Timeline (2021-2022)

Legend

- Bold are staff proposals and Decisions
- Proceeding Track 1
 - Distribution Planning Process (DPP)
 - Electrification Impact Study (EIS)
- Proceeding Track 2
 - Future Grid Study (FGS)
- Proceeding Track 3
 - Smart Inverter Operationalization (SIO)
 - Working Group (WG)
 - General Rate Case (GRC)



Listing of Reports, Staff Proposals, and Workshops

2021-2022

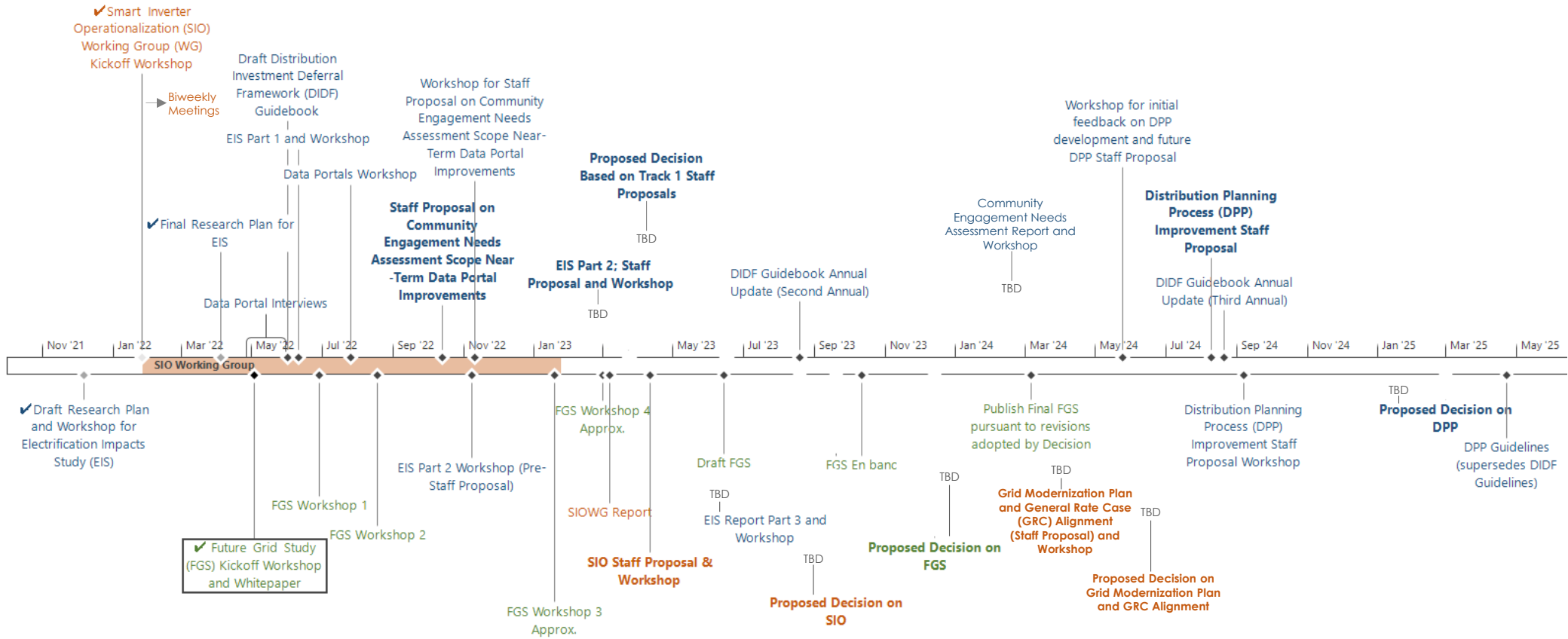
	Item	Date	Track	Consultant
✓	Draft Research Plan and Workshop for Electrification Impacts Study (EIS)	12/7/2021	1	Kevala
✓	Smart Inverter Operationalization (SIO) Working Group (WG) Kickoff Workshop	1/25/2022	3	Verdant, Xanthus
✓	Final Research Plan for EIS	4/4/2022	1	Kevala
✓	Future Grid Study (FGS) Kickoff Workshop and Whitepaper	5/3/2022	2	Gridworks
	Draft Distribution Investment Deferral Framework (DIDF) Guidebook	May-22	1	Verdant
	Data Portal Stakeholder Interviews	May-22	1	Verdant
	EIS Part 1	May-22	1	Kevala
	FGS Workshop 1	6/8/2022	2	Gridworks
	EIS Part 1 Workshop	June-22	1	Gridworks, Kevala
	Data Portals Workshop	July-22	1	Gridworks, Verdant
	FGS Workshop 2	8/17/2022	2	Gridworks

Listing of Reports, Staff Proposals, and Workshops

2022-2023

Item	Date	Track	Consultant
Community Engagement Needs Assessment Workshop	Sept-22	1	Verdant
Evaluate Grid Needs Assessment/Distribution Deferral Opportunity Report (GNA/DDOR) Filings (Big Data Analytics)	Sept-22	1	Kevala, Verdant
Staff Proposal on Community Engagement Needs Assessment Scope and Near-Term Data Portal Improvements	Oct-22	1	Verdant
Workshop for Electrification Impacts Staff Proposal Development (EIS Part 2)	Nov-22	1	Gridworks, Verdant
Final DIDF Guidebook (1st annual version)	Nov-22	1	Verdant
FGS Workshop 3	Jan-23	2	Gridworks, Verdant, Xanthus
EIS Part 2 (Electrification Impacts Staff Proposal)	TBD	1	Kevala, Verdant
FGS Workshop 4	March-23	2	Gridworks, Kevala, Xanthus
Smart Inverter Operationalization (SIO) Working Group (WG) Report	March-23	3	Verdant, Xanthus
EIS Part 2 (Electrification Impacts Staff Proposal) Workshop	TBD	1	Gridworks, Kevala, Verdant

Work Plan Timeline (2021-2025)



Listing of Reports, Staff Proposals, and Workshops

2023

Item	Date	Track	Consultant
Proposed Decision (Near-Term Actions)	TBD	1	Kevala, Verdant
SIO Staff Proposal	April-23	3	Verdant, Xanthus
Draft FGS	May-23	2	Gridworks
SIO Staff Proposal Workshop	May-23	3	Verdant, Xanthus
EIS Part 3 and Workshop	TBD	1	Kevala, Verdant, Gridworks
DIDF Guidebook Annual Update (2nd annual)	Aug-23	1	Verdant
FGS En banc	Sept-23	2	Gridworks
Proposed Decision (SIO)	TBD	3	Verdant, Xanthus
Workshop for Grid Modernization Plan and General Rate Case (GRC) Alignment Staff Proposal Development	2023	3	Verdant, Xanthus
Evaluate GNA/DDOR Filings (Big Data Analytics)	2023	1	Kevala, Verdant
Proposed Decision (FGS)	TBD	2	Gridworks

Listing of Reports, Staff Proposals, and Workshops

2024

	Item	Date	Track	Consultant
	Grid Modernization Plan and General Rate Case (GRC) Alignment (Staff Proposal) and Workshop	2024	3	Verdant, Kevala
	Community Engagement Needs Assessment Report and Workshop	2024	1	Verdant
	Distribution Planning Process (DPP) Improvement Workshop	2024	1	Gridworks, Verdant
	Data Portals Improvement Report and Workshop	2024	1	Verdant
	Proposed Decision (Grid Modernization Plan and GRC Alignment)	TBD	3	Verdant, Kevala
*	Distribution Planning Process (DPP) Improvement Staff Proposal and Workshop	2024	1	Verdant
	DIDF Guidebook Annual Update (3rd annual)	Aug-24	1	Verdant
	DPP Improvement Staff Proposal Workshop	2024	1	Gridworks, Verdant
	Evaluate GNA/DDOR Filings (Big Data Analytics)	Sept-24	1	Kevala, Verdant
	Proposed Decision (DPP)	2024	1	Verdant
*	DPP Guidelines (supersedes DIDF Guidebook)	2025	1	Verdant

Question / Answer

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