

Clean Energy Transformation Update



WA Department of Natural Resources - Solar Carport and EV Charging Project

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Today's Objectives

Provide staff update on:

Commission Priority #9

Implement greenhouse gas reduction and clean energy strategies

- Overview of recent internal EV charging and solar energy feasibility assessments
- Overview of O-34 process for project review and implementation

Climate Resilience Framework

Adapt

Preparing the park system for emerging climate realities

Mitigate

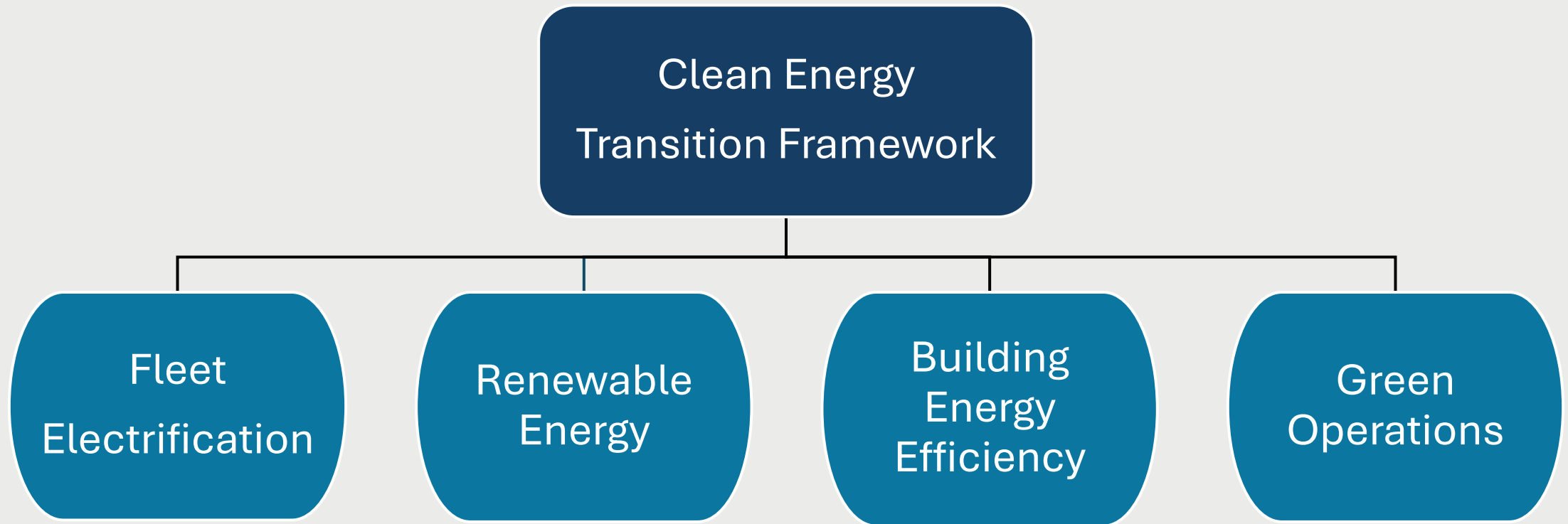
Addressing the agency's contributions to climate change

Educate

Building a shared awareness of climate impacts on the park system

Mainstreaming climate-informed practices into the development, operation and stewardship of the Washington state park system.

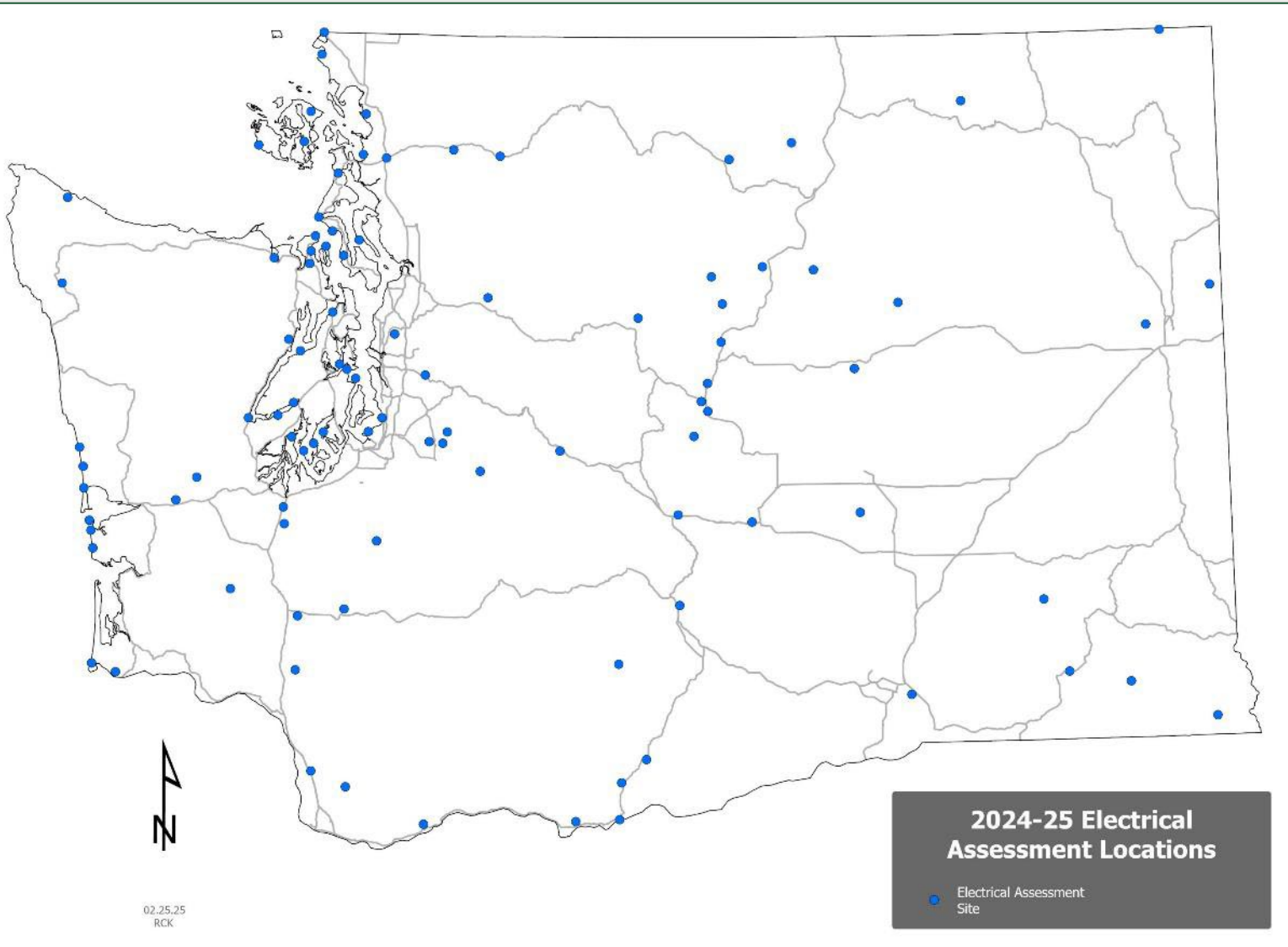
Greenhouse Gas Emission Reduction Strategy (RCW 70A.45.050)



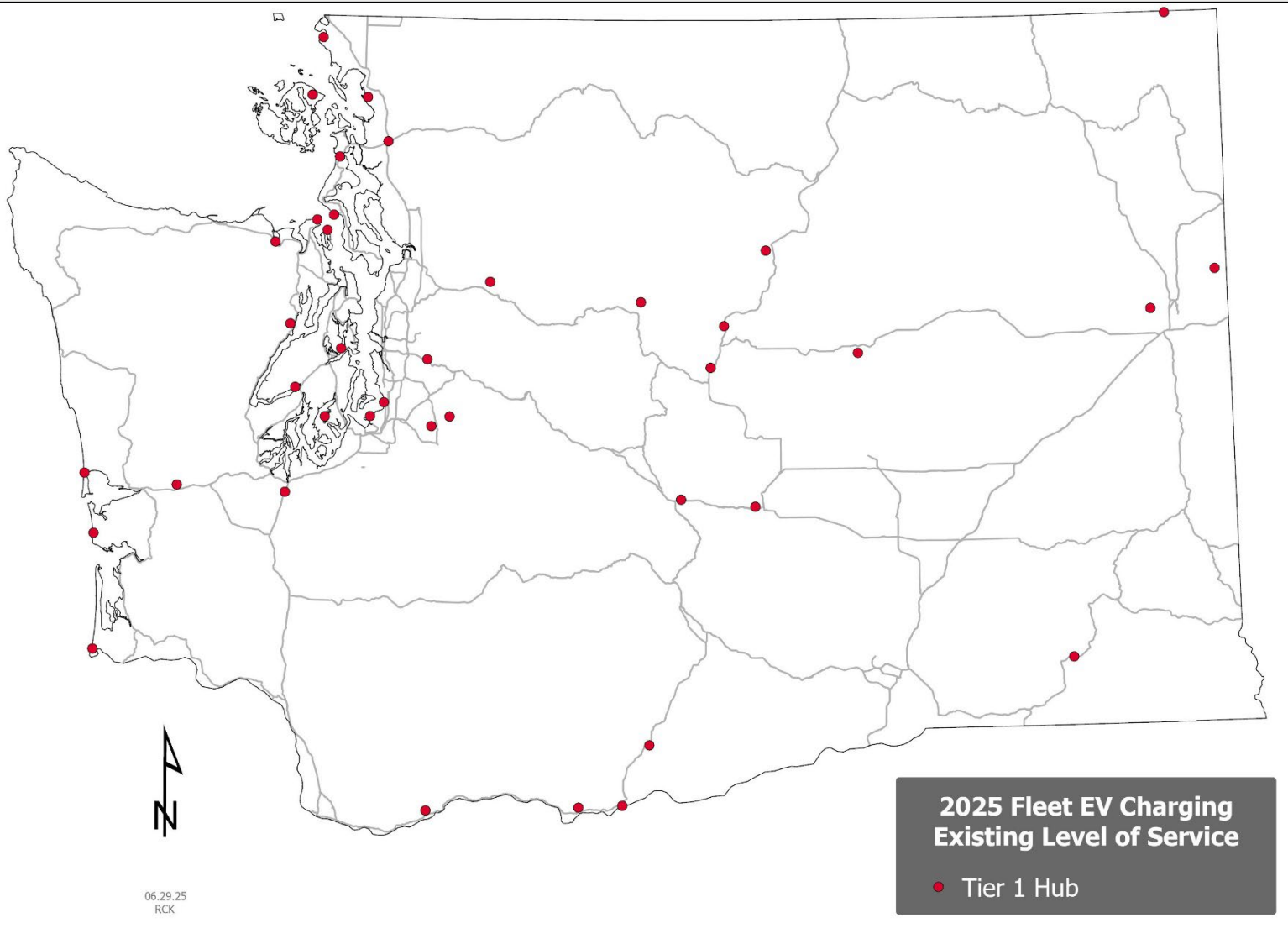
Statewide Electrical Systems Assessment

Key Project Goals

- Assess existing electrical systems serving fleet vehicles
- Identify opportunities and constraints to fleet EV charging network development
- Identify rough cost estimates to achieve proposed level of service



Existing Electric Vehicle Charging Network

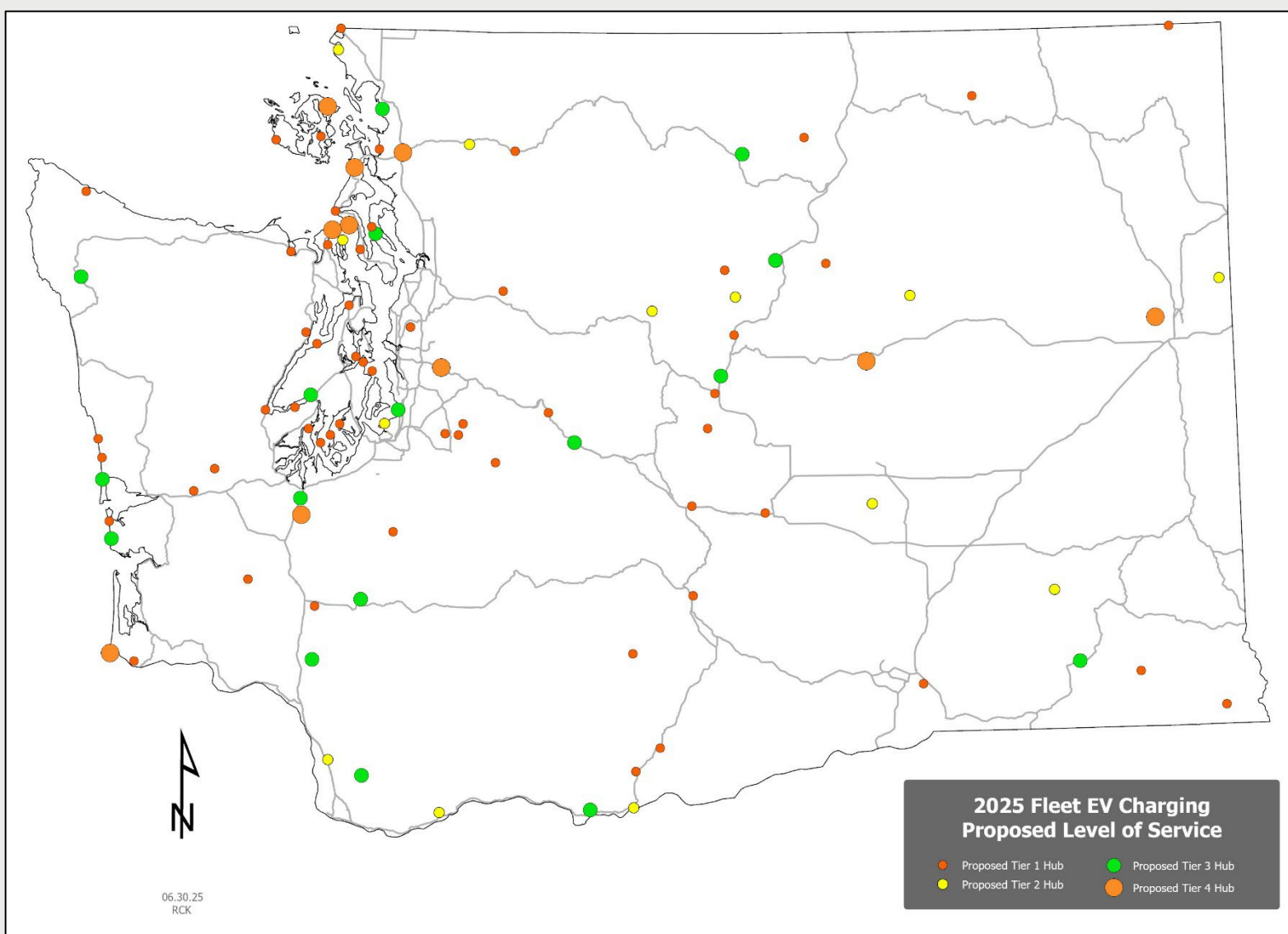


- Many electrical systems at or near capacity and need upgrades
- Currently 39 parks with Level 2 charging capacity (32 amp)

Example of Tier 1 fleet EV charging hub



Proposed Electric Vehicle Charging Network



- Statewide network to serve HQ, Region and Area fleet EV charging needs
- Proposed network includes 200 EV chargers
 - 173 Level 2 chargers
 - 27 Level 3 chargers



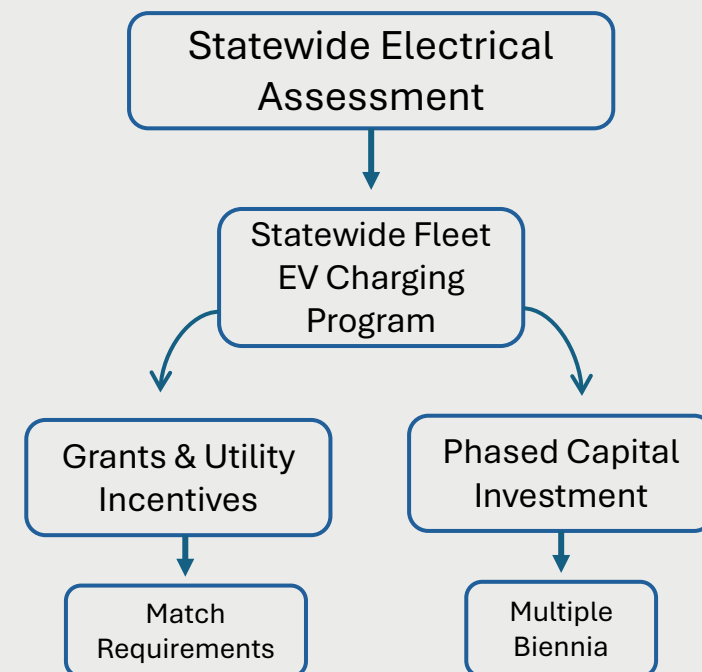
Statewide Electrical Systems Assessment



Key Takeaways:

- Lack of networked EV chargers limits ability to document use
- Many sites will require modern electrical system upgrades
- Highly limited opportunities for Level 3 service (DC charging)
- Capacity for upgrades is highly utility-provider dependent (32 separate utilities statewide)

\$29 million is rough-order of magnitude (ROM) cost estimate to build out proposed network of 200 fleet EV chargers

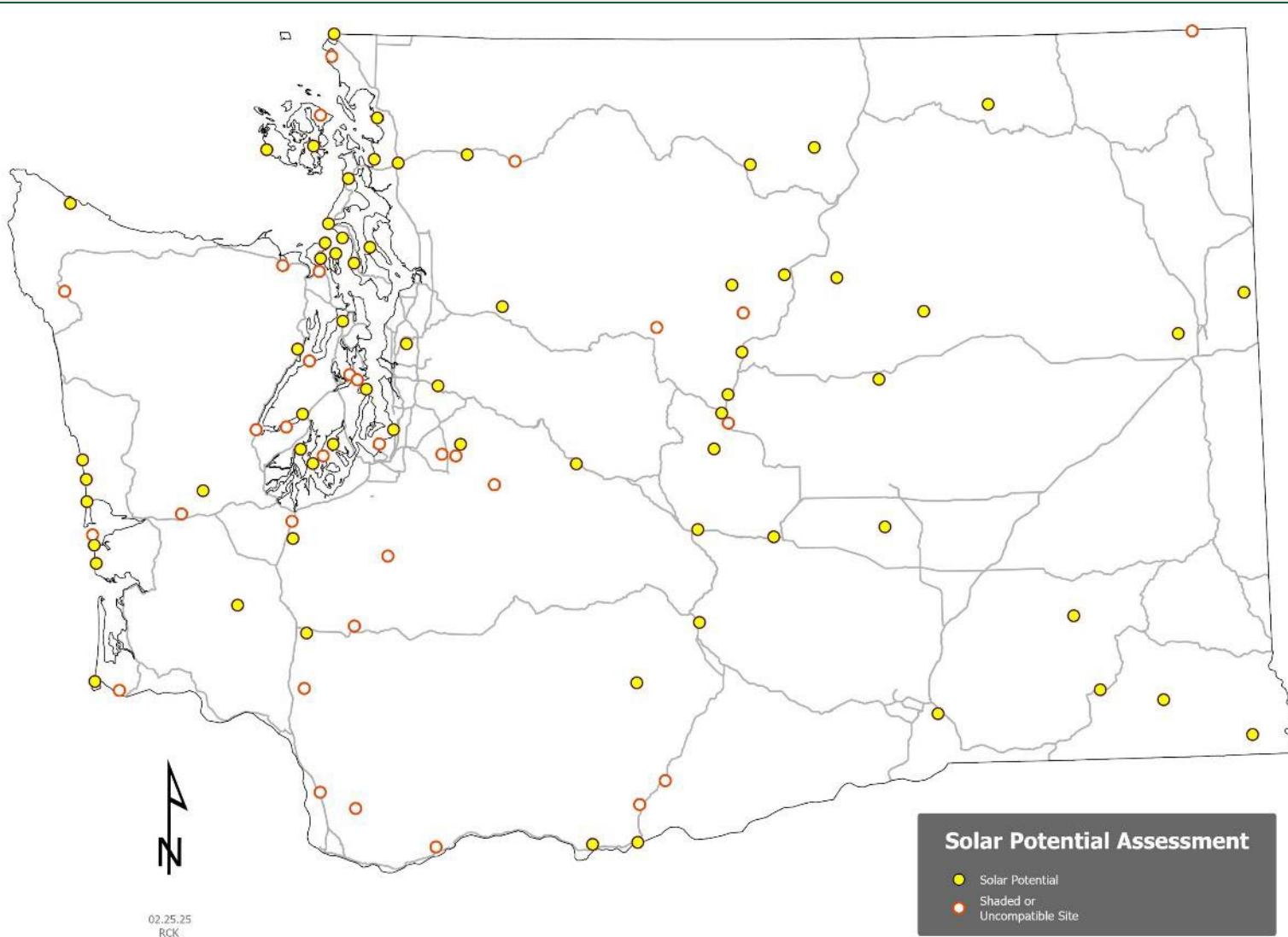


Solar Energy Initiative

Draft Solar Energy Initiative Goals

- Supplement energy supply to reduce operating costs
- Demonstrate agency sustainable practices
- Reduce greenhouse gas emissions
- Optimize with future capital and maintenance investment

Phase 1 - Solar Energy Feasibility Assessment



- Initial focus on supplementing fleet EV charging needs and admin. site energy use
- At least 70 park admin. sites have solar generation capacity



Phase 2 - Solar Facility Profile Assessment



Belfair State Park



Sucia Island Marine State Park



Grayland Beach State Park



Fort Worden Historical State Park

Phase 2 - Solar Facility Profile Assessment



BLM Natural Area, OR



Mount Pisgah State Park, PA



Salt Springs State Park, PA



Ryerson Station State Park, PA



Hither Hills State Park, NY

Phase 2 - Solar Facility Profile Assessment



Housing



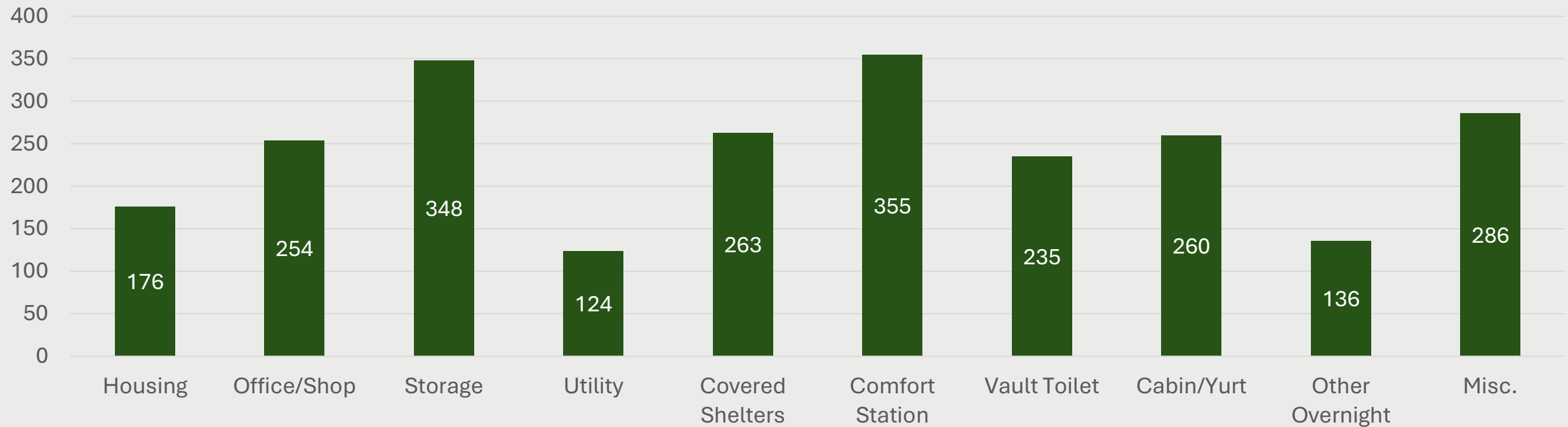
Park Office



Comfort Station



Interpretive Center



Phase 3 - Solar Production Feasibility

- **Shading**
- Ownership
- Utility connection
- Offset potential
- Mounting Options



Crawford State Park Heritage Site

Phase 3 - Solar Production Feasibility

- Shading
- **Ownership**
- Utility connection
- Offset potential
- Mounting Options



Wenatchee Confluence State Park

Sacajawea Historical State Park



Phase 3 - Solar Production Feasibility

- Shading
- Ownership
- **Utility connection**
- Offset potential
- Mounting Options



Ginkgo Petrified Forest State Park

Phase 3 - Solar Production Feasibility

- Shading
- Ownership
- Utility connection
- **Offset potential**
- Mounting Options



Goldendale Observatory State Park Heritage Site

Pearrygin Lake State Park



Phase 3 - Solar Production Feasibility

- Shading
- Ownership
- Utility connection
- Offset potential
- **Mounting Options**



Letchworth State Park Visitor Center, NY



Gifford Pinchot State Park, PA

Roof-Mounted Considerations

- Roof Orientation
- Roof condition
- Site constraints
- Visual impacts



Deception Pass
Park Office

Ground-Mounted Considerations

- Land use
- Ground disturbance
- Critical areas
- Net-metering capacity



Phase 4 - Solar Facility ROM Cost Assessment

Main Cost Constraints

- Mounting structure
- Location and Mobilization
- Project alignment
- Economies of scale



Pearrygin L. Contact Station
Rooftop Array: 5.0 kW
Cost per Watt = \$10.80



Riverside – ORV Shop
Rooftop Array: 14.0 kW
Cost Per Watt = \$11.10



Deception Pass Park Office
Rooftop Array: 26.0 kW
Cost per Watt = \$11.10



Ginkgo Petrified Forest IC
Rooftop Array: 44.0 kW
Cost per Watt = \$11.20

○
\$54,000

○
\$156,000

○
\$298,000

○
\$492,000

Phase 4 - Solar Facility ROM Cost Assessment

Main Cost Constraints

- Mounting structure
- Location and Mobilization
- Project alignment
- Economies of scale



Pearrygin Lake Shop
Carport Array: 45.0 kW
Cost per Watt = \$18.00

○
\$810,000



Ginkgo-Wanapum parking
Carport Array: 76.0 kW
Cost Per Watt = \$18.30

○
\$1,388,000



Fort Worden Shop Complex
Ground Array: 127.0 kW
Cost per Watt = \$13.60

○
\$1,728,000



Goldendale Observatory
Carport Array: 125.0 kW
Cost per Watt = \$18.50

○
\$2,313,000



FROM CONCEPT TO COMPLETION

THE WORK PROJECT
REQUEST PROCESS
(aka O-034)





- Used by the agency for decades
- Modified and adapted over the years to meet changing needs
- Ensures projects are aligned with the agencies mission, directives, and policies and in compliance with local, state, federal and Tribal requirements that apply.



PLANNING FOR PARK PROJECTS

ORGANIZE ESSENTIAL PROJECT INFORMATION

REVIEW, CONSULTATION, AND APPROVAL THOROUGH SUBJECT MATTER EXPERTS (SME'S) USING THE WORK PROJECT REQUEST PROCESS



 WASHINGTON STATE PARKS & RECREATION COMMISSION OPERATIONS DIVISION		
Work Project Request		
1. PARK: Park Name	2. PARK O-034 NO.: XXXX ##### - 00#	3. PROJECT TITLE:
4. SUBMITTED BY/CONTACT INFORMATION:		5. FUNDING SOURCE: Select from dropdown
		FUNDED COST CODE:
6. PROJECT LOCATION (BUILDING NO.):	7. EST. STARTING DATE: Select date	8. EST. COMPLETE DATE: Select date
A. DETAILED PROJECT DESCRIPTION / SCOPE OF WORK		
☐ Review O-34 Flow Chart & Instructions ☐ Check if Park Staff will be doing the work		
B. PROJECT JUSTIFICATION/CONSIDERATION		
C. PLEASE PROVIDE THE FOLLOWING AS ATTACHMENTS OR IN THE COMMENTS SECTION		
9. Photo of area in review	☐ YES ☐ N/A	10. Maps
11. Drawings	☐ YES ☐ N/A	12. Dimensions of project elements (buildings, structures, trails, fences, etc.)
13. Digging/trenching proposed? (Include specific locations / dimensions)	☐ YES ☐ N/A	14. Amount of vegetation/tree removal?
15. Proximity to wetlands and/or bodies of water?	☐ YES ☐ N/A	16. ADA Compliant?
17. Geolocation/Shape files included?	☐ YES	Coordinates: Lat.: Long.:
18. Section C Comments:		
D. LABOR, EQUIPMENT, AND MATERIALS REQUIRED (If work being done by Park Staff)		
18. LABOR, EQUIPMENT, & MATERIALS	COST EST.	
SUB TOTAL:		
19. ADDITIONAL COSTS: Describe additional costs:		
TOTAL:		
21. COST CODE FOR ARCHAEOLOGY / PERMITTING:		

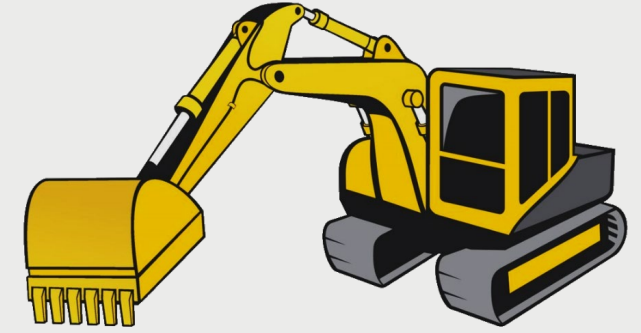
WORK PROJECT REQUEST
 P&R O-034 (REV. 04/2024)
 Page 1 of 7

DAN: GS 21010, 11, 14 or 15
RETAIN: 6 years, see Retention Schedule for details

- ✓ Ground disturbing activity
 - ✓ Work in or over water
 - ✓ Any known permits required. (i.e., Building, Electrical, Environmental, etc.)
 - ✓ Working within 300 feet of any shoreline.
 - ✓ Tree removal (Does not replace Tree Activity Worksheet)
 - ✓ Project occurring on federal or other leased land that Parks manages.
 - ✓ Project involves a historic structure. (If unsure ask Historic/Cultural Resources staff)
 - ✓ Project occurs near listed or sensitive species habitats. (If unsure ask Environmental Planner)
 - ✓ Contractual or deed restrictions at the location.
 - ✓ Sea level rise impacts. (If unsure ask Sustainability staff)
 - ✓ **If you are unsure whether any of the above apply.**
- 
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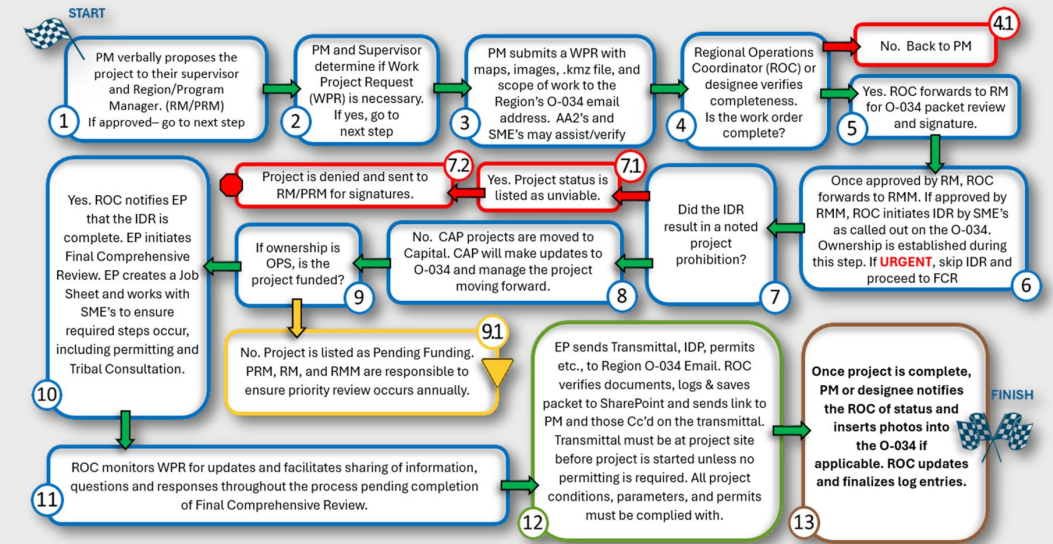
What Happens Next?



- ✓ Once it is determined that a Work Project Request is necessary, it goes through collaborative review by staff, including Subject Matter Experts (SME's).
- ✓ A key member of this review process is each Region's Environmental Planner (EP).
- ✓ The EP provides information on all environmental permitting elements of the project and are the reviewers who ensure tribal considerations are addressed.



- ✓ EP's also create the Job Sheet which gets distributed to other SME's such as Cultural, Archy, Stewardship, and Historical.





FULL TRANSPARENCY AND ACCESS THROUGHOUT THE PROCESS

On Inside Parks



Inside Parks Organization Projects Find It Documents (formerly N: Drive)

Statewide Maintenance Program Category 1 \ Public Information

Contact Us Bulletin Board Central Shop O-034 Region Crews Statewide Maintenance Statewide Marine Documents Edit

+ New Promote Page details Analytics

Published 10/21/2024 Share Edit

STATEWIDE MAINTENANCE

O-034 Work Project Requests

An O-034 Work Project Request is a request for any physical change to a park, and allows Parks to track project approvals and status.

When should I submit?

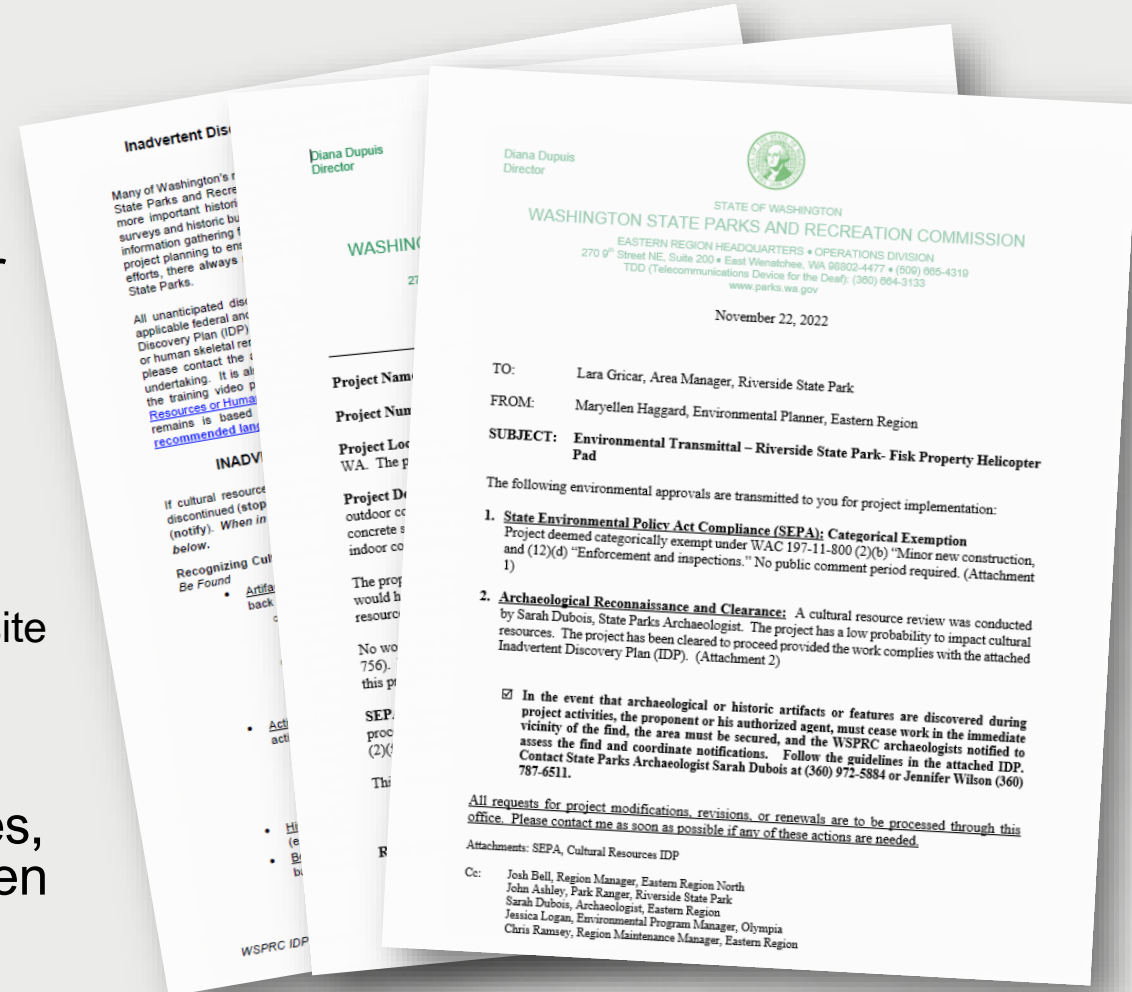
Submit an O-034 Work Project Request form for any maintenance, upgrades, or physical changes which may involve one or more of the following:

- Ground disturbing activity
- Work in or over water
- Any known permits required. (i.e., Building, Electrical, Environmental, etc.)
- Working within 300 feet of a marine, river, stream or lake shoreline or feature
- Tree removal
- Project occurring on federal or other leased land that we manage
- Project involves a historic structure. (If unsure ask Historic/Cultural Resources staff)
- Project occurs near listed or sensitive species/habitats. (If unsure ask Environmental Planner)
- Contractual or deed restrictions at the location
- See how this impacts (If unsure ask Sustainability staff)



Approval to Proceed...

- Region Environmental Planner issues an Environmental Transmittal. This can include some or all of the following:
 - Statement of SEPA compliance
 - Cultural Resources Review
 - Inadvertent Discoveries of Cultural Resources and Human Skeletal Remains Plan specific to the park area
 - Instructions for ensuring Tribal/park staff are present at job site if required
 - Other additional Terms & Conditions
- The Regional Operations Coordinator receives, saves, and logs all documentation to the SharePoint site then sends the packet to the Project Manager and others Cc'd on the Transmittal
- The Project Manager can now proceed with the work





Why Use the Work Project Request Process?



EV Charging
Station Installation

- High quality projects completed with use of internal skills and guidance
 - Improves our parks and fulfills our mission objectives
- Introduces sustainable and renewable projects to parks across the state
 - Improves relationships with other local, state, and federal agencies
- Builds Government to Government relationships with the Tribes of Washington State
 - Ensures partners, neighbors, and local communities are engaged in park projects when appropriate.
 - Enables the agency to ensure facilities conditions are being tracked
 - Provides important reference materials for agency records and park history



Historic Buildings Re-Roofing



Restoration of Lime Kiln on San
Juan Island



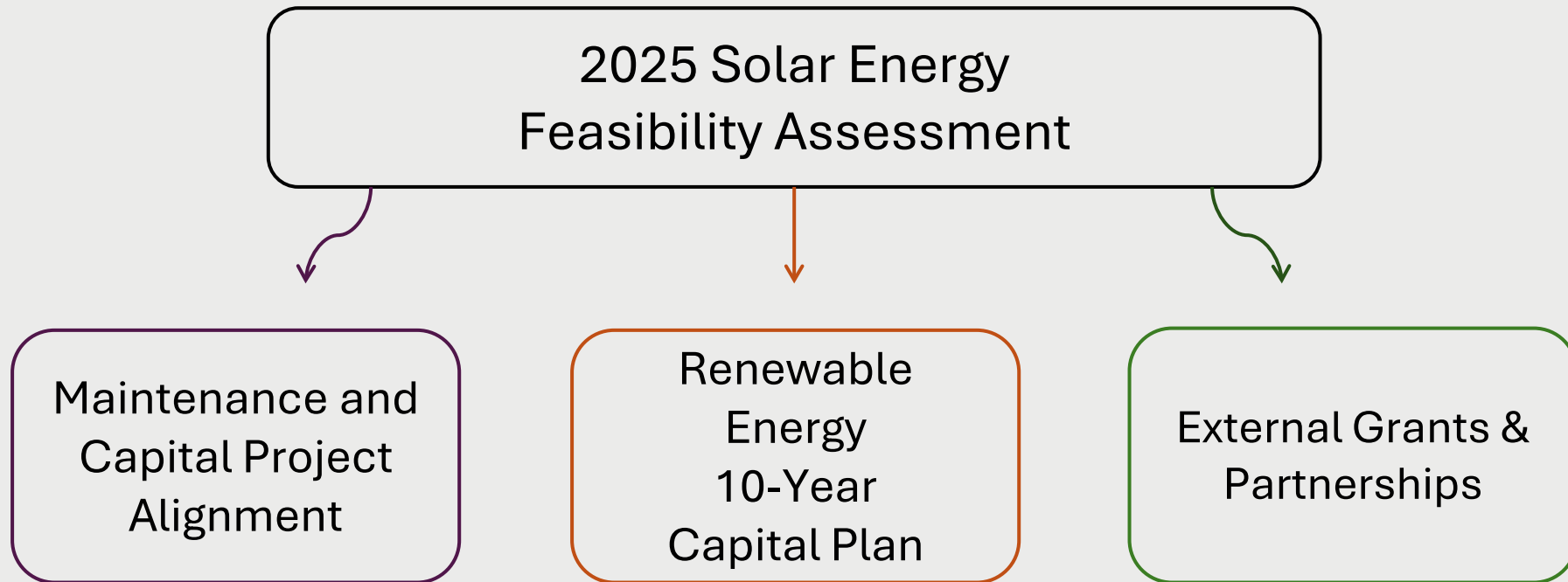
ADA Campsite Renovation



New Trailhead on Palouse
to Cascades Trail



Where do we go from here?

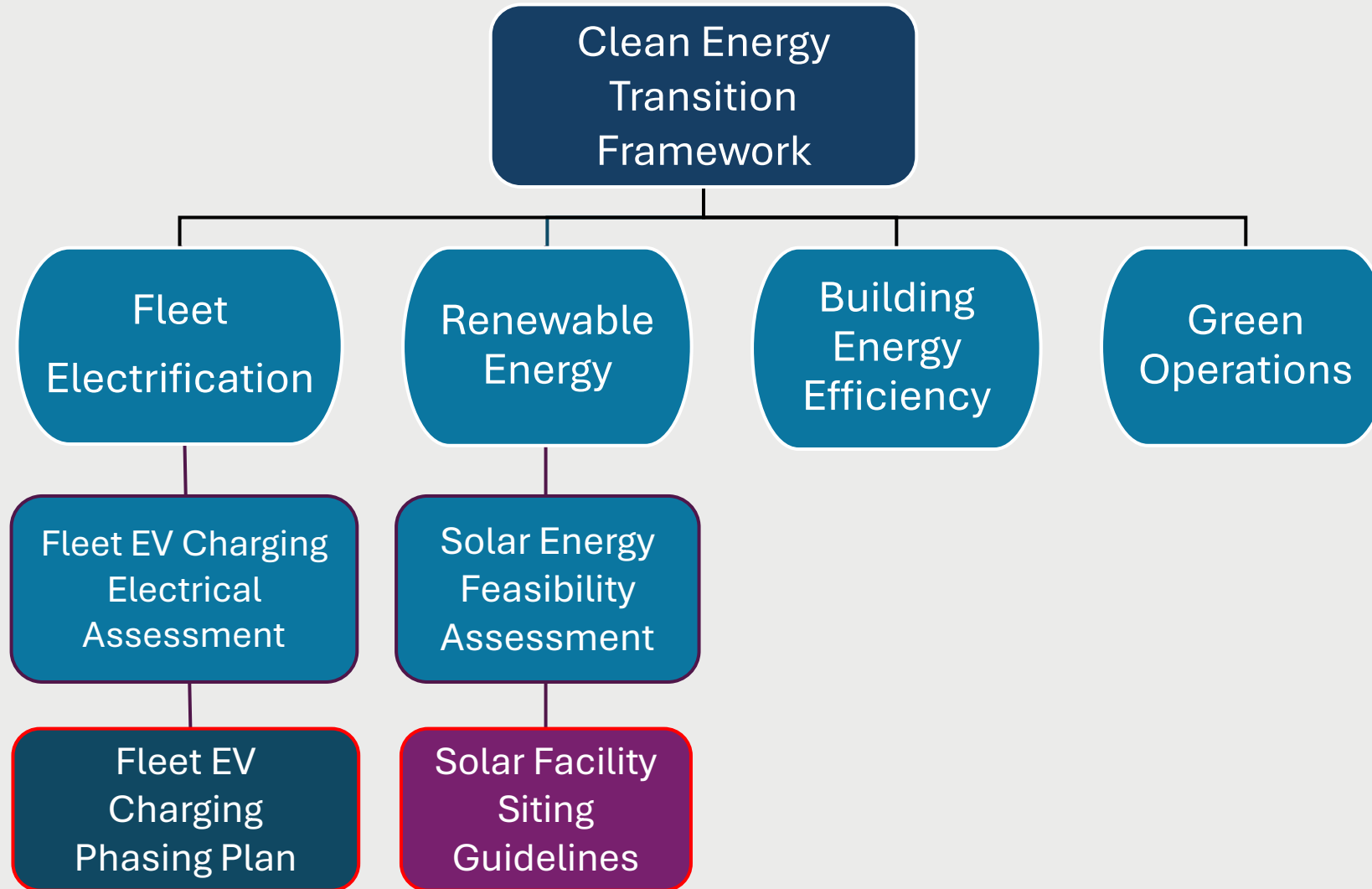


Where do we go from here?

2025-27 Clean Energy Transition Budget Request

Budget Item	Agency	Final
	2025-27 Request	2025-27 Budget
Master Equipment Program (MEP)	\$1,500,000 (Operating)	Carryforward (Operating)
Equipment Replacement	\$2,100,000 (Operating)	\$0
Phase 2 Historic Building Energy Audits	\$600,000 (Operating)	\$0
Statewide: Fleet EV Charging & Renewable Energy Project	\$2,000,000 (Capital)	\$0
Statewide: Historic Building Energy Efficiency Project	\$2,500,000 (Capital)	\$0

Next Steps



Ground-Mounted Array Concept Proposal

Concept design for 100 kW ground array at Alta Lake



Park/Site	kHw/year (2024)	Electric Bill (FY24)
Alta Lake	196,392	\$22,299



View looking south at Alta Lake Coulee from near proposed site

State Parks Foundation Concept: Round One - Initial Stewardship Site Review

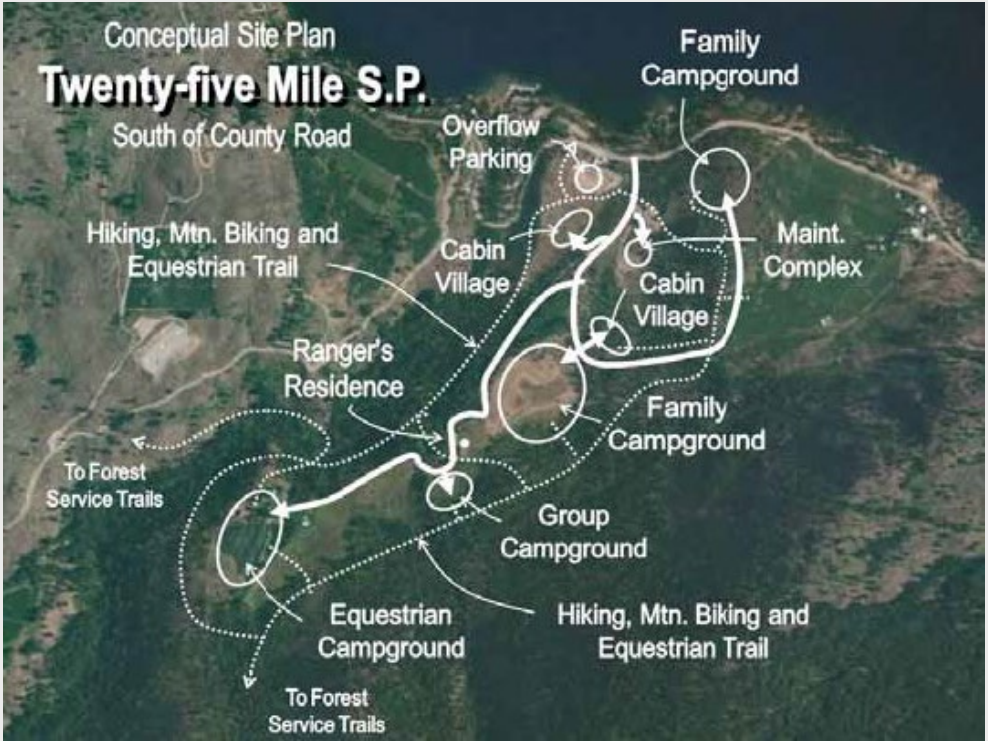
Park/Site	Ownership	Archaeology	Historic Preservation	Priority Habitat Species	SEPA - Critical Areas	Land Classification
Riverside (ORV)	1.0	4.0	1.0	1.0	1.5	1.0
25 Mile Creek	1.0	3.0	1.0	2.5	1.0	1.0
Fort Flagler (West-Beach)	1.0	4.0	1.0	2.0	1.0	1.0
Pearrygin Lake	1.0	3.0	1.0	2.0	2.0	1.0
Yakima Sportsman - north	1.0	3.0	1.0	1.0	3.0	1.0
Olmstead Place	1.0	2.0	3.0	2.0	1.5	2.0
Sun Lakes	1.0	4.0	3.0	1.0	1.0	2.0
Yakima Sportsman - south	1.0	4.0	1.0	2.0	3.0	1.0
Blake Island	1.0	4.0	1.5	3.5	2.5	1.0
Curlew Lake	3.0	4.0	1.0	3.0	2.0	1.0
Fort Flagler (East-Heritage)	1.0	4.0	3.5	2.0	1.5	2.0
Daroga (Chelan PUD)	3.0	4.0	1.0	3.0	2.5	1.0

Ground-Mounted Array Concept Site Review

Twenty-Five Mile Creek 100 kW Array Concept



Park	kHw/year (2024)	Electric Bill (FY24)
25-Mile Creek	` 75,000	\$4,457



Ground-Mounted Array Concept Site Review

Pearrygin Lake 100 kW Array Concept



Park/Site	kHw/year (2024)	Electric Bill (FY24)
Pearrygin Lake	429,245	\$41,338

- Tribal review
- Operational impacts
- Distance to meter connection

Ground-Mounted Array Concept Site Review

Yakima Sportsman 100 kW Array Concept



Park/Site	kHw/year (2024)	Electric Bill (FY24)
Yakima Sportsman	158,563	\$18,969

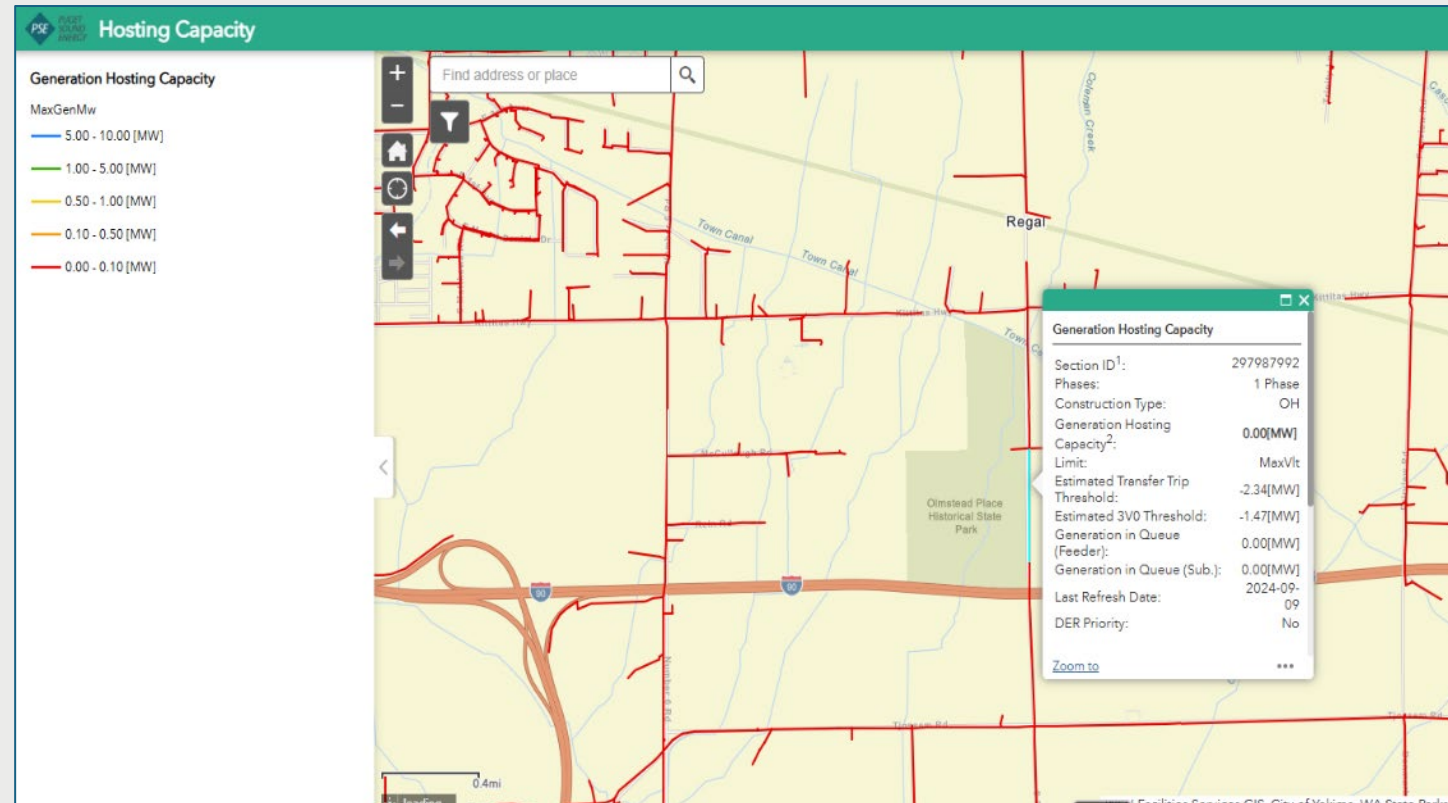
- Tribal review
- Yakima River flood zone
- Site security

Ground-Mounted Array Concept Site Review

Olmstead Place 100 kW Array Concept



Park	kHw/year (2024)	Electric Bill (FY24)
Olmstead Place	130,446	\$19,371



Questions?



Contacts

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