EXH. SLT-7
DOCKETS UE-22___/UG-22___
2022 PSE GENERAL RATE CASE
WITNESS: SUZANNE L. TAMAYO

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY,** **Respondent.**	**Docket UE-22____** **Docket UG-22____**

SIXTH EXHIBIT (NONCONFIDENTIAL) TO THE PREFILED DIRECT TESTIMONY OF

SUZANNE L. TAMAYO

ON BEHALF OF PUGET SOUND ENERGY

JANUARY 31, 2022

GTZ – Implementation of IWM for Electric Operations

Gate change to Execution

Corporate Spending Authorization (CSA)

Before starting: Contact the Capital Budget team (CSA-TeamMail@pse.com) for any clarification needed and review the CSA Standard when completing this template.

The sections provided expand / are not limited to one row. **Ensure you provide adequate information and back-up documentation to support your business case.** If a section or item is not applicable, enter N/A; if unknown, enter TBD. The gray fields are provided as prompts; do not leave these fields with instructions visible.

Date Submitted:	4/2/2021
Officer Sponsor:	Margaret Hopkins & Booga Gilbertson
Project Director:	John Mannetti
Responsible Cost Center:	5632

I. Project Overview

Update each section with high level information as applicable, noting any changes from the previous request/Gate.

Business Need:

PSE's customer experience is highly connected to field operations processes and personnel. Customer-initiated requests drive over 200,000 service requests for PSE's field employees each year. PSE-initiated work requiring onsite customer interaction accounts for an additional 700,000 work orders (WO) annually. Integrated Work Management ("IWM") is an enterprise approach to managing field work required to support customer service work and, the construction, operation, and maintenance of its core physical assets. It aims to provide visibility to work through its lifecycle; Initiation, Planning, Scheduling, Execution and Close.

Strong utility work management practices lead to the on-time completion of asset maintenance, customer work, compliance and emergency work with understanding that the work is being performed for the right cost.

PSE's work management practices are currently spread across numerous systems, organizations and manually driven, paper-based processes. There are four key business drivers for implementing IWM at PSE: operational efficiency; improved customer experience; improved data governance; and addressing existing system obsolescence issues.

1. **Operational Efficiency:** There are several areas where improvements can be made to improve operational efficiency resulting in a lower unit cost for work or more work completed for the same cost.

    1.1. **Financial Tracking of Work:** Currently, O&M work is executed using SAP notifications and standing internal work orders. Notifications cannot collect information for material usage, labor planning or actual cost. Standing internal work orders serve as cost collection buckets for various work types. This means that there is no way to connect the actual job performed with its actual costs and specific duration. Because of this, cost and work efficiency information is difficult to derive and mainly done at a high level. This in turn limits management's ability track work at a more granular level which is necessary to drive continual

improvements to operational performance. Additionally, field workers are expected to pick from long lists of work orders containing FERC information in order to charge time to the right activity. This creates confusion in the field and inaccurate costing information.

The IWM solution resolves these issues by changing SAP so that work is performed utilizing SAP PM work orders and operations, instead of notifications as it's done today. SAP PM work orders contain planned material information, planned labor duration and can collect the individual costs of specific jobs. In collecting this information, business units can perform plan to actual analysis of work and derive unit costs for work completion, enabling informed resourcing and performance management decisions. Additionally, IWM changes how work orders are created and how the cost settlement is derived. Instead of field workers picking from long lists of work orders, the accounting is derived when the order is created. The field worker only has to execute the order on his or her device and costs will settle to the correct order.

1.2. **Visibility to the work:** Currently, information about what field work needs to be performed is housed in numerous systems including SAP, spreadsheets and databases. This leads to missed opportunities to perform work in similar geographical locations, return visits, and sub-optimization of field resources. In some cases field personnel are split between electronic and paper processes depending on the type of work that they are doing. Because not all of the work is planned in SAP, there is no consolidated view of resource loading or work backlog across operational business units.

The IWM solution resolves this by putting all work into SAP and executing that work through work orders. By doing this, all work will have due dates, statuses, locations and resource requirements in the system allowing schedules to be optimized for efficiency.

1.3. **Manual and Paper-Based Processes:** Meter Operations, Meter Network Services and groups in gas and electric operations perform work off paper notifications and manual scheduling. This causes up to two hours of lost productivity each day due to work prioritization, paper printing and manual scheduling. Additionally, back office personnel are required to process the paper notification and close out the work.

IWM eliminates paper-based work by dispatching work through automation to electronic devices in the field. Field personnel then interface with specific work orders pushing relevant status, asset, customer, and inspection data back to SAP in real-time where that information is stored centrally in the system. This eliminates the need to process paper on the back end and perform manual data entry during work closeout. Additionally, because of the automation and integration of our systems through this project, work that is being performed in the field will now be visible in real-time for employees, and in many instances, our customers, allowing a better understanding of the status of scheduled work and providing other valuable data points to help resolve issues more quickly.

1.4. **Improved Work Scheduling:** Work is currently scheduled using manual paper-based processes or manual scheduling with electronic dispatch of work. This is a labor and time-intensive process that may not result in optimized use of resources.

IWM will install a schedule optimization system called Click which accounts for geography, work priority, work duration, employee skill sets and resource availability to produce an optimized schedule for employees. Work can be scheduled daily or through a "drip feed" process where employees get their next job when the current job is finished. This allows the schedule to be optimized throughout the day as emergencies or other priorities arise.

2. Improved Customer Experience: Improving customer experience with PSE field work is an important driver of IWM. Through customer facing Get to Zero (GTZ) initiatives, PSE will create the capability to proactively communicate information to our customers. Under today's paper based processes and disintegrated systems Customer Service Representatives (CSRs) in PSE's call center have no visibility into work occurring in the field. This means that when customers call with questions related to service orders, CSRs have little information to provide regarding the status of their work. Also, customer appointment work is typically provided with an AM or PM window, with field workers often having to coordinate times directly with customers.

IWM will enable more granular, two hour appointment timeslots to be provided to customers based on real-time field resource availability. Also, through improved schedule optimization, customer appointments can be reallocated to other resources if emergency work enters the schedule.

3. **Improved Data Governance:** Data integration and management is a core principle for IWM. Currently many digital and paper based data collection processes result in disparate data sets not tied to customer data or PSE assets. Existing work management and data collection tools such as SAP, PCAD, BW, and GIS, are not in sync and create bad data that later will need to be reconciled or scrubbed.

IWM will govern all data collected and funnel it to and through SAP. Whenever possible that data will be tied to a meter location or a PSE asset with work order history. This approach adds work visibility to multiple teams, including the call center, which provides additional information to the agent to share with PSE's customers. It also transitions data from dispersed locations to placement within PSE's approved system architecture and then makes that information available to a wider audience.

4. **Addressing System Obsolescence Issues:** Currently, both the Gas First Response (GFR) and Electric First Response (EFR) organizations use a system called PragmaCAD or PCAD to perform electronic dispatch and execution of field work. This system handles over 110,000 jobs per year for GFR and 55,000 jobs per year for EFR. The PCAD system has reached end-of-life and must be replaced.

IWM addresses this obsolescence issue by replacing PCAD with SAP Work Manager mobility and Click Schedule scheduling and dispatch tools. Additionally, IWM will be bringing more work types into the system

to better optimize resources and providing a schedule optimization capability to take the place of manual scheduling.

Proposed Solution:

The IWM release for the Electric Operations business at PSE is a part of the overall roadmap to deliver IWM in a rolling fashion, and will be the 4th IWM deployment (following Meter Operations, Meter Network Services & Gas Operations, respectively.) With IWM having launched to Meter Operations, much of the foundation of IWM has been built. For every subsequent rollout, additional functionality and specific business requirements will be met for the particular needs of the target business group.

The foundational components of IWM that will be leveraged and expanded for this release for Electric Operations are:

1. **SAP Work Mgmt. Systems (WMS)** – Will provide visibility through the cost and lifecycle of the work. It will enable planning, tracking of a work order / operation for all IWM targeted field work. Scope includes; a move away from use of Standing orders & Internal orders for IWM field work, the use of one order representing one unit of work, use of operations in orders as tasks required to perform that work, planned hours and costs captured on work order, full use of Work Centers to identify crews and individuals, and the movement of all IWM field work into SAP.

2. **Workforce Scheduling (Click)** – Will be a common build of scheduling, dispatch and process and technology for all gas & electric field work. This includes the schedule and dispatch of work order operations to crews or individuals utilizing resource loaded schedules. PSE will have specific dates & times and the ability to match job requirements to available crew skills. The benefit is schedule optimization will prioritize emergencies, customer appointments and compliance work. All individuals will now be visible and schedules will be centralized for optimization. There will also be an improved customer experience with the implementation of two hour window customer appointments.

3. **Workforce Mobility**- Will provide field crews electronic mobile capabilities to receive status and report on work activities. Field crews will have electronic mobile capabilities to receive, status, and report on work activities. It will also include the ability to field validate and update asset attributes and provision of active crew locations. This enables field employees to document their work digitally within Work Manager and reduce the need for back office entry of the work resulting in FTE reductions. Another benefit is this sets the platform for customer communications about job progression.

4. **Cost Management** – Build upon what was implemented as part of the Financial Transparency Improvement Project (FTIP). Changes in SAP ECC PM, FI, CO, PS, enabled full lifecycle financial tracking of a PM work order operation for all IWM targeted work. This moves PSE away from the use of standing orders for field work and the use of planned costs captured on work orders. Alignment of these activity types and costing sheets with Work Centers for planning & actual costing. It also revisits and revises the WO settlement rule derivation and FERC indicator derivation for IWM related work and moves away from FERC order types.

The IWM solution for Electric Operation will add the following specific functionality:

Scope	Description
Electric Operations Plan/Process	All of the relevant labor and hardware/software costs that will go into the planning and designing of the IWM launch. The work includes requirements gathering, documenting functional designs and building of to-be processes related to launching IWM to Electric Operations
Customer Communications	The Electric Operations release of IWM will include all the EFR work, System Operations, Substation and Potelco work that will impact emergency management. It also includes enabling customer communications for all IWM work up to date. (GFR, EFR, MNS, MO, CCS, CSP, Substation “emergency work”, and Contractor Crews “emergency work”). Requires CI CSA for web appointments approved.
Unplanned Work	The unplanned work that would be a part of the IWM scope includes outages/emergencies, reconnects, patrol requests and emergency switching.
Planned Work & Appointments	The planned work scope includes planned switching, customer initiated appointments and maintenance work. Implement appointments with 2 hour windows.
Substation work Inclusion	Provide digital forms to the Substation Inspectors for performing and managing the substation inspections as well as electric outages/emergencies that would occur within the Substation. Customer communication will be enabled for the emergency work, to allow the substation crew provide real time incident updates from the field using the IWM solution.
EFR PCAD Conversion	Execution to take all existing work in PCAD and convert to Click/Work Manager. The work includes the development, building, testing, cutover and OCM and training related to launching IWM to Electric First Response.
ADMS Integration	All ADMS incidents will have a corresponding SAP WO to provide visibility to all work within the IWM solution. Dispatchers will triage unplanned incidents in ADMS and use the assign functionality to push to Click for actual crew assignment
SAP & Process Enhancements for C&SP	Build SAP functionality for C&SP that would setup a platform that will support any and all operational work performed for PSE’s customers
Service Provider Inclusion	Provide a method for electric service provider “Potelco” to receive electric outage WO electronically and perform incident updates as well as WO closure from the field.
Electric Operations Operating Model Review	Define the electric operations operating model to support the work management activities. Potentially create/utilize the exiting centralized planning

	organization for Meter Ops, Meter Network Services, and Electric First Response, Substations. Also review coverage areas for efficiencies
EFR Mobile Tools	Strategy, planning and execution to rollout mobile devices and associated accessories such as vehicle mounts, fuse blocks, etc. to EFR.
Substation Ops Mobile Tools	Strategy, planning and execution to rollout mobile devices and associated accessories such as vehicle mounts, fuse blocks, etc. to Substation Inspectors (~16 FTEs)
EFR & Substation Inspectors Time Sheeting	Enable electronic time recording in Work Manager
EFR Crew Callout Integration	Interface between IWM and the new crew callout application. (ARCOS may be selected by business to provide this functionality)
Digital Forms	Digitize and/or convert any forms utilized by Electric First Response and Substation Inspectors to Work Manager
Collect data currently on paper forms within a database	Current paper form data collected by EFR is digitized and placed in an integrated database outside of SAP
Data Cleanup for Functional Locations	Data cleanup effort to ensure all customer locations, as well as isolating devices (fuse, xfrm, switches etc.) have an address or Lat/Long associated with them to be sent to SAP/Click from ADMS
Visibility of all work at a location	This function would allow the field crews see the maintenance history of any specific location to help with trouble shooting and providing an improved level of customer service
Barcoding	Leverage barcoding for meter/device exchanges to accurately transfer data from the field to SAP (Applies to EFR and Substation)

Project Outcome/Results:

The IWM program for Electric Operations will improve operation efficiencies and reduce system obsolescence risk:

Six outcomes of driving operational efficiencies:

1. **Enhance employee visibility**: Historically employee visibility with PCAD has been a challenge as the mobile tools had to be docked within the vehicle to provide employee location. The new mobile tool provides location, as long as it is powered on, and does not allow for employees to toggle it off. IWM is also planning to release the mobile tool to Substation Inspectors which currently do not have PCAD functionality. This will allow System Operations to have clear line of sight to their location, and better utilize them for outage response, resulting in improved emergency response times.

2. **Improve Work Scheduling:** IWM, with utilization of the automated work optimization tool Click, will prioritize for emergencies, appointments, due date and low priority work. Items such as switching and high bill investigates will see improvement in completing the work by the due date. For emergencies IWM will suggest the closest qualified personnel to the Dispatcher so they may choose who the appropriate responder is. PSE will also begin leveraging Click functionality to provide 2-hour appointment windows for customer requested work. This is a significant enhancement over the existing process of managing customer requested work as soon as EFR can get on premise. With the purpose of enhancing the customer experience, this is consistent with IWM's approach across other Operations teams. Additionally, Click is transformational in the way work is managed as it optimizes the schedule for the field employee and drip feeds them their tasks. This removes the self-management of schedules and work priorities. This is helpful in many ways but the largest for EFR may be how it constrains work that is performed in overtime.

3. **Improve Data Capture:** Utilizing the SAP product Work Manager, IWM will create digital forms capturing work performed in the field by EFR, Substation Inspectors and PSE's Service Provider**.** Capturing work from the teams in the same format and centralizing the information in SAP drastically improves system awareness and outage information. Moreover, digitization will reduce the number of calls made to the System Operators for data capture and will allow them to concentrate on other priorities. Work Manager forms will also help improve field safety by providing a platform to share safety documentation, as well as switching sheet details, in a digital format. IWM will also digitize substation maintenance forms with the result of improving data quality and reducing back office data entry. Improved coordination is a benefit of all these efforts as the work is completed real time in the field, information is shared to others (GFR, MO, MNS, C&SP) with follow-on tasks.

4. **Integrate with OMS/ADMS:** Developing a real-time two way interface between SAP, Click and ADMS will sync the creation of incident work orders, crew status and work assignments. Having full visibility in ADMS for the System Operators will increase the situational awareness, field safety and reduce response times. This is helpful in both blue sky and storm scenarios.

5. **Enhance SAP Platform for Customer and System Projects (C&SP):** IWM has been building temporary SAP functionality, on cross-departmental work, between teams that utilize IWM tools and those that do not. This 'dual' functionality isn't a sustainable solution as it forces C&SP to manage work in two separate formats, creating additional work and elevating risk that mistakes could be made. Working with non-uniform processes and tools across workgroups ultimately impacts the customer experience. The scope of this effort would be to build SAP functionality for C&SP that would setup a platform that will support any and all operational work performed for PSE's customers. The outcome of this effort will improve timely job completion by efficiently facilitating a handoff between workgroups. It also streamlines the inefficiencies around all the orders and notifications created for a single customer job.

6. **Enable Customer Communications:** IWM will enable timely capture of data from the field that could be communicated to PSE's customers. The vision is providing information about items such as outages, appointments, or the status of customer work. Additional items shared could be a field employee is in-route or onsite to perform a customer related task. This would be for all teams utilizing IWM, including Meter Operations, Gas Operations, Meter Network Services, Electric First Response, and the Service Provider. This creates a consistent approach for messaging, to PSE's customers, across all of Operations. The enablement of customer messaging requires funding and coordination with the CI Appointment Enhancement project.

Address System Obsolescence Risk:

The current obsolescence and retirement of the existing dispatch and mobility tool: The PragmaCAD or "PCAD" system is currently used by EFR to manually schedule, dispatch and execute work in the field. This system was implemented in 2008, is currently unsupported, and has reached end-of-life and must be replaced. If PCAD fails, emergency response will be prioritized, with no material impact to response times. Customer satisfaction will be negatively impacted as appointments are missed and reconnect activities are delayed. Customer service work will be reduced anywhere between 50% and 100% depending on availability of resources. The cumulative impact is significant as PSE does not have enough Operations employees to manually manage the work and meet performance expectations.

OCM, Process & Training Impact:	○ N/A	○ Low Impact	○ Medium Impact	◉ Significant Impact
	Integrated Work Management implements transformational processes and tools which change current operating models. The reduction in back office paperwork and automation of processes will heavily impact PSE employees. This will require significant effort for Organizational Change Management, Process, and Training.			
Primary ISP Alignment:	Processes & Tools	ISP strategy descriptions		
ISP Strategy Description:	Process & Tools - Streamline processes to drive effectiveness and efficiency			
Portfolio Description:	Strategic	Capital Allocation Definitions		
Project Complexity:	○ Straightforward and well understood	○ Complex and well understood	◉ Complex and not well articulated	

II. Key Schedule and Financial Information

Expected Start Date If Funded:	01/2020
Expected In-Service Date:	08/16/2021

High-Level Schedule *Enter Expected # of Years and Months*

Duration

Planning	Design	Execution	Total Project	Anticipated Closeout date
7 months	**4 months**	**8 months**	**21 months** (including closeout)	10/2021

Initial Estimated Funding % by Phase as of 12/1/2019**:** *Enter values to include both O&M and Capital in the cells below for percentage of funding to be used in each phase of the project.*

Planning	Design	Execution	Closeout
30%	**18%**	**41%**	**11%**

Initial Grand Total Estimate (contingency included): **Contingency Standard**	**Capital: $31,544,420**	**OMRC/Project O&M: $1,163,690** (Not including O&M Tail)

Estimated Five Year Allocation: *Enter values in the cells below for years anticipated, up to five years, plus any expected future years. Change "Year 1, Year 2, etc. to the relevant years for this project.*

Category:	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital (contingency included)	**$9,993,232**	**$15,125,505**	**$0**	**$0**	**$0**	**$25,118,737**
OMRC / Project O&M	**$484,838**	**$678,852**	**$0**	**$0**	**$0**	**$1,163,690**

III. Ongoing Benefits

Summary Benefits (see Benefits realization plan for details):

Department Name	Annual Amount	Benefit Description
Electric Ops - Koch	$376,000	Reduce overall OT hours/expenses: $219,000 to $376,000
Electric Ops - Koch	$325,000	Back Office work efficiency and accuracy with timesheeting
IT Shared Svc - Tamayo	$236,000	Eliminate PCAD and associated annual maintenance
IT Applications - Fellon	$39,500	Eliminate FTE support of PCAD application
Total	**$976,500**	

Category:	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Ongoing additional O&M (Note: ongoing O&M is covered by the previous IWM R3 for Gas Ops)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Ongoing additional Capital**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Benefits	**$0**	**$488,252**	**$976,500**	**$976,500**	**$976,500**	**$3,417,752**
Net impact (= Benefits – Ongoing additional O&M – Ongoing additional Capital**)	**$0**	**$488,252**	**$976,500**	**$976,500**	**$976,500**	**$3,417,752**
* Payback in Years	Years = N/a (payback exceeds expected life)					

* Enter positive amount or Not Applicable
** IT projects using ongoing capital maintenance only

IV. Risk Management Summary

Identify high level risk categories expected for the project. Consider Project Dependency, Project Timing and Resourcing, as well as Regulatory Risk.

Summary of high level risks sentence:	1. Electric Operations does not fully buy-in to IWM. This could lead to changes in scope, delays in delivery, and increases to costs. To mitigate this risk, the project will develop an OCM & training plan and deliver the requirements and features that are promised. This risk will be monitored by the engagement (activity, feedback, and participation) of Electric Operations employees. 2. Project falls behind in regards to scope, schedule, or budget. To mitigate this risk, the project will report weekly status, manage resource hours and costs, and have tradeoff conversations to see where any compromises can be made. This risk will be monitored by comparing progress to a project plan and financial forecasts. 3. Benefits are not achieved. To mitigate this risk, the project will develop a dashboard to measure and report KPIs. KPIs will be measured weekly with the business to monitor this risk.

V. Phase Gate Change Summary

Use this section for changes from: ***Planning to Design****,* ***Design to Execution*** *or* ***Execution to Closeout*** *phases. To have a history of the changes at each phase gate change,* ***copy/paste the table below above the previous table.***

Phase:	Design to Execution
Scope:	No Change

Budget:	No Change
Schedule:	Though there is no current schedule change in the Design to Execution Phase, it is appropriate to call out some additional challenges that occurred in the Planning Phase that impacted the IWM schedule due to Covid 19. Some examples would be R4 complexities with designing collaboratively in a digital remote environment, simultaneously virtually training Gas Operations in a safe manner, and considering PSE employees ability to perform their regular duties in the challenging environment. Employees faced issues such as base closures for cleaning, new personal protective requirements, and inability to meet or pair up. The IWM Training team also had to transition from traditional training materials to a more arduous digital approach. In the end IWM is proud of the results, and what the team achieved, but it's important to point out the impact to the Planning Phase for R4.
Benefits:	No change to annual hard dollar amount. First year realization was lowered to reflect current scheduled go live date of 8/16 as outlined in previous gate change. Benefit title was edited to provide more flexibility on how it's achieved.

Department Name	Annual Amount	Benefit Description
Electric Ops - Koch	$376,000	Reduce overall OT expenses
Electric Ops - Koch	$325,000	~~Back Office work efficiency and accuracy with timesheeting~~ Improved resource utilization
IT Shared Svc - Tamayo	$236,000	Eliminate PCAD and associated annual maintenance fees in 2022
IT Applications - Fellon	$39,500	Eliminate FTE support of PCAD application
Total	**$976,500**	

Category:	Year 1 (2020)	Year 2 (2021)	Year 3 (2022)	Year 4 (2023)	Year 5 (2024)	Total
Ongoing additional O&M (Note: ongoing O&M is covered by the previous IWM R3 for Gas Ops)	$0	$0	$0	$0	$0	$0
Ongoing additional Capital**	$0	$0	$0	$0	$0	$0
Benefits	$0	~~$488,252~~ $325,500	$976,500	$976,500	$976,500	~~$3,417,752~~ $3,255,500
Net impact (= Benefits – Ongoing additional O&M – Ongoing additional Capital**)	$0	$488,252 $325,500	$976,500	$976,500	$976,500	~~$3,417,752~~ $3,255,500

Prepared by:	Brady Kinsella

Phase: Planning to Design

Scope:

The initial scope considered as part of the planning phase was based on the solution provided to Gas Operations as part of the IWM R3 project. As the solution was adapted for Electric Operations and to meet their specific business needs, it was identified that some scope was not relevant or did not support the benefits. As the scope was modified to meet the specific needs of Electric Operations, the benefits were minimally impacted. Additionally other opportunities were identified that would be a better fit for Electric Operations and added to the scope.

The **Proposed Solution** described above on pages 4-6 were amended as follows:

Scope	Change
Planned Work & Appointments	Expanded to include System Abnormals and Circuit Inspections
OMS (formerly ADMS) Integration	Expanded to include a general integration to OMS (Outage Management System) which includes both the existing OMS system as well as preparing for the next-generation ADMS (Advanced Distribution Management System) OMS. Integration unique to ADMS will be delayed until ADMS has been deployed.
Customer Communications	Integration with the PSE website removed from this project and deferred until the PSE website has been upgraded to support the full integration.
EFR Crew Callout Integration	Integration with the EFR Crew Callout tool removed from this project and deferred until the Callout tool has been upgraded to support integration.
Service Provider Inclusion	Integration with external Service Providers removed from this project and deferred for future consideration.
EFR Time Sheeting	Removed Substation specific time recording. EFR time sheeting is still in scope as originally planned.
Barcoding	Removed from this project and deferred for future consideration.

Budget:

The IWM R4 project for Electric Operations had a slower ramp up thus expenses in 2020 were lower than planned. The delay in ramp up was caused by delays to the IWM R3 project for Gas Operations. The delays in R3 were primarily driven by accommodations due to Covid 19. This reduced spend on R4 for Electric operations resulted in a budget give back in 2020 to support overall PSE mitigations around Covid 19.

2021 project estimates have increased as a result of the schedule and scope revisions. $2,000,000 of project contingency will be used to fund this increase and allow the project to stay within approved 2021 budget. After consuming this contingency the project will only carry 7% contingency into the Design phase (standard is 15%) so while there is some budget risk with this approach, the team feels comfortable this can be mitigated.

	2020	2021	Total
Initial Estimate	$16,418,915	$15,125,505	$31,544,420
Dec 2020 Update	$9,993,232	$15,125,505	$25,118,737
Change	($6,425,683)	$0	($6,425,683)

Schedule:	While IWM R4 for Electric Operations started on time, full staffing was delayed in order to support IWM R3 for Gas Operations. This delay combined with the scope changes will push out the expected go-live date to August 16th, 2021 and closeout to October 31st, 2021.
Benefits:	No change. Removed scope had minimal impact on the hard benefits which is why these items were de-scoped.

Prepared by:	Andrew Drapp

VI. CSA Approvals

Add/remove rows as needed in the table below. Email approval is acceptable. To maintain a history of the changes at each phase gate change, ***copy/paste the table below above the previous table.*** *Send to the*

Capital Budget team at CSA-TeamMail@pse.com. For a project in the Strategic Project Portfolio (SPP) review the Escalation Criteria for appropriate escalation and approvals.

For guidance on approval authority levels, follow CTM-07 Invoice Payment Approval Exhibit I Invoice/Payment Approval Chart

Project Phase	Design to Execution			
Approved By	**Title**	**Role**	**Date**	**Signature**
John Mannetti	IWM Sponsor	*Director Sponsor		John Mannetti Approval.msg
Dan Koch	Dir Electric Operations	Key Benefit Owner		Dan Koch Approval.msg
GtZ Steering Co. • **Harry Shapiro** • **Brian Fellon** • **Jennifer Tada** • **Matt Marcelia** • **Greg Zeller**	Steering Committee	Other Key Director		Harry Shapiro Approval.msg Brian Fellon Approval.msg Jennifer Tada Approval.msg Mat Marcelia Approval.msg Greg Zeller Approval.msg
Margaret Hopkins	VP & CIO	Executive Sponsor		FW CSAs and PCRs for week
Booga Gilbertson	Sr VP Operations	Executive Sponsor		

Project Phase	Planning to Design			
Approved By	**Title**	**Role**	**Date**	**Signature**
John Mannetti	IWM Sponsor	*Director Sponsor	2/19/2021	RE IWM R4 PCR #7 and Planning to Des
Dan Koch	Dir Electric Operations	Key Benefit Owner	2/19/2021	RE IWM R4 PCR #7 and Planning to Des
GtZ Steering Co. • **Brian Fellon** • **Harry Shapiro** • **Dan Koch** • **Jennifer Tada** • **Matt Marcelia** • **Greg Zeller**	Steering Committee	Other Key Director	2/19/2021	Re IWM R4 PCR #7 and Planning to Des RE IWM R4 PCR #7 and Planning to Des RE IWM R4 PCR #7 and Planning to Des Re IWM R4 PCR #7 and Planning to Des RE IWM R4 PCR #7 and Planning to Des
Margaret Hopkins	VP & CIO	Executive Sponsor	2/19/2021	FW PCRs and CSAs for week of 2 15.msg
Booga Gilbertson	Sr VP Operations	Executive Sponsor	2/22/2021	RE IWM R4 Planning to Design

Project Phase	Initiation to Planning			
Approved By	**Title**	**Role**	**Date**	**Signature**
John Mannetti	Dir Operations Solutions	*Director Sponsor	12/20/2019	John Mannetti Approval.msg
Josh Jacobs	Dir GtZ	*Director Sponsor	12/20/2019	Josh Jacobs Approval.msg
GtZ Steering Co. • **Brian Fellon** • **Harry Shapiro** • **Dan Koch** • **Jennifer Tada** • **Matt Marcelia** • **Greg Zeller**	Steering Committee	Other Key Director	12/20/2019	Brian Fellon Approval.msg Harry Shapiro Approval.msg Dan Koch Approval.msg Jennfer Tada Approval.msg Matt Marcelia Approval.msg Greg Zeller Approval.msg
Margaret Hopkins	VP & CIO	Executive Sponsor	2/6/2020	Margaret Approval.msg
Booga Gilbertson	Sr VP Operations	Executive Sponsor	2/6/2020	Booga Approval.msg

*Director Sponsor attests that all considered documentation has been approved.

Please direct any questions to either:

1. The Capital Budget team at CSA-TeamMail@pse.com, or
2. The Enterprise Project and Performance Project Practices team at EPP-ProjectPracticesTeam@pse.com