

# DER Interconnection Applicant Requirements

November 6, 2024

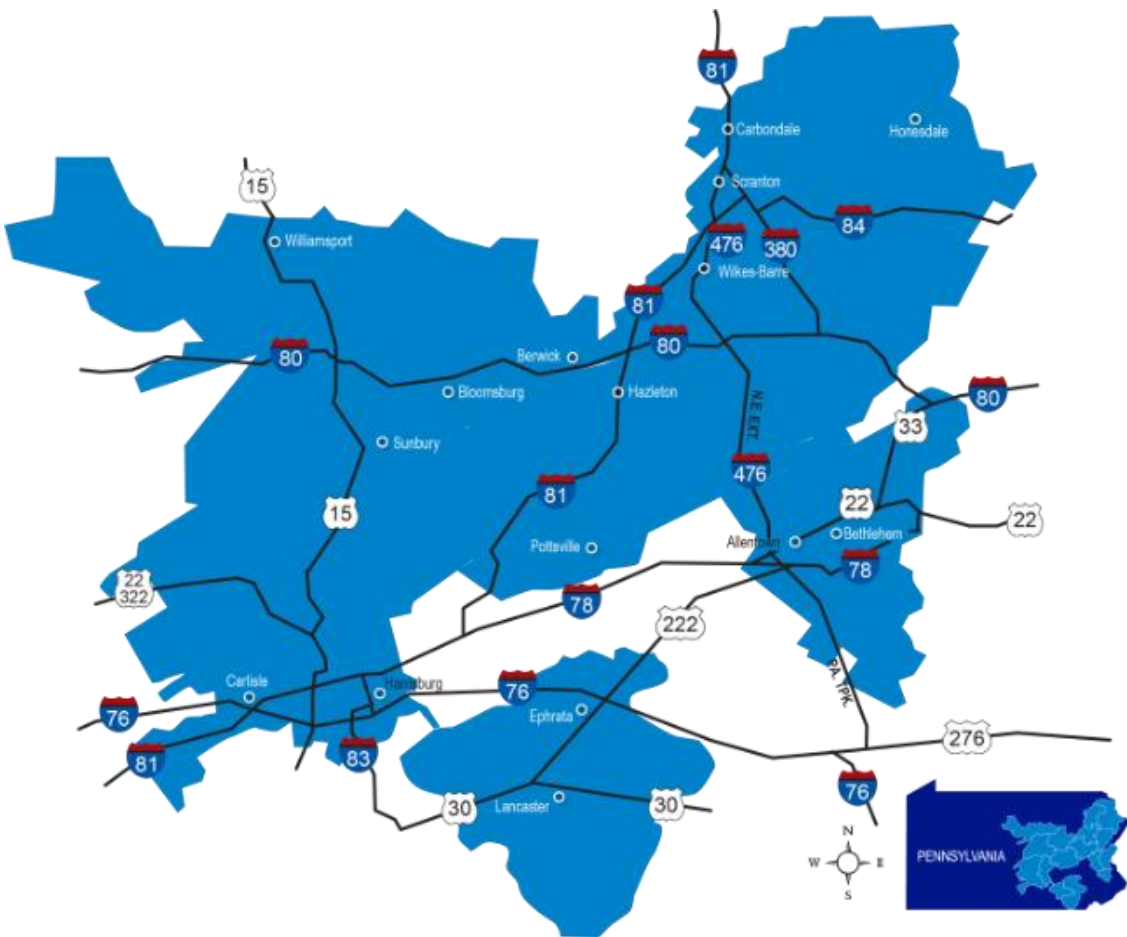
# Agenda

- |              |                                   |   |
|--------------|-----------------------------------|---|
| • 8:30 a.m.  | Registration/Check-In             |   |
| • 9:00 a.m.  | Safety Message                    | Carol Obando-Derstine                         |
| • 9:05 a.m.  | Welcome & Introductions           | Preston Walker                                |
| • 9:10 a.m.  | PPL Electric Utilities Background | Carol Obando-Derstine                         |
| • 9:15 a.m.  | Pre-Application                   | McClain Fultz                                 |
| • 9:20 a.m.  | Application Process               | McClain Fultz, Krista Schmoyer, & Micah Clark |
| • 9:45 a.m.  | Break                             |   |
| • 10:00 a.m. | Project Life Cycle                | Carol Obando-Derstine                         |
| • 10:15 a.m. | Regulatory Reviews                | George Beam                                   |
| • 10:30 a.m. | Frequently Asked Questions        | Carol Obando-Derstine                         |
| • 10:45 a.m. | DER Management Project            | Aliesha Dombrowski-Diamond                    |
| • 10:50 a.m. | Web Resources                     | Denis Pancoast                                |
| • 11:05 a.m. | Q&A                               | Carol Obando-Derstine                         |
| • 11:40 a.m. | Closing                           | Carol Obando-Derstine                         |



# PPL Electric Utilities Background - A Powerful Network

*Superior operations drive significant value for customers.*



**1.5M**  
Customers served

**29**  
Counties

**50K+**  
Miles of transmission and  
distribution powerlines

**1,700+**  
Dedicated employees

Data as of Dec. 31, 2023

# We are Focused on Driving Sustainable Value

*Guided by an enduring corporate mission and compelling strategy.*

## Mission

Provide safe, affordable, reliable, sustainable energy to our customers and competitive, long-term returns to shareowners.

## Strategy

Create the Utilities of the Future.



Enhance the **reliability and resiliency** of our electric networks through **strategic investments**.



Advance a **clean energy transition** while preserving **affordability and reliability** for our customers.



Drive **operational efficiency** across PPL to **deliver long-term value** for customers and shareowners.

*Strategy supports customer value, a clean energy transition and economic development.*



PPL Electric Utilities



# Our Strategic Investments are Delivering Value for Customers

*Advancing grid innovation and automation as well as hardening the grid to improve reliability and resiliency while maintaining affordability.*



## Driving reliability, safety and efficiency

- Grid hardening investments across distribution and transmission systems.
- Replacing aging equipment with stronger poles and wires.
- Building new substations and upgrading existing ones.

## Implementing grid automation and innovation

- Deploying non-wires and Grid Enhancing Technologies (GETs) to increase capacity and reliability.
- Meeting demand for Distributed Energy Resources (DERs).

# Pre-Application

Customer Details – To be Completed by Customer/Contractor

Customer/Contractor Name	Bill Smith
Service Address	333 New Solar Rd
Applicant's Contact Number	610-xxx-xxxx
Contact Name for Invoice	Bill Smith
Contact Address for Invoice	333 New Solar Rd
Contact Email Address for Invoice	solarstar@gmail.com
PPL Grid Number or Latitude/Longitude	64823S47832
Existing PPL Electric Customer	New
PPL Electric Bill Account Number (Existing Only)	
Customer's Service Voltage	12.47kV (3 phase)
Approximate In-Service Date	10/15/2026
Existing DER Size, if applicable (kW)	None
Proposed DER Size 1 (kW)	500kW
(Optional) Proposed DER Size 2 (kW)	3000kW
Proposed Energy Source	Solar
Date Submitted	4/1/2024
Additional Comments	

The DER Pre-Application fee is a non-refundable fee in the amount of \$750 and must be paid in full prior to the pre-application's review. The DER Pre-Application fee is not applied to the interconnection application fee, upgrade fees, equipment charges, or any additional PPL charges required prior to the installation of the DER.

Interconnection Pre-Application Results – To be Completed by PPL Electric

Substation Name	
Substation Voltage	12.47kV
PPL Electric Feeder (XXXXX)	
Customer Service Voltage	12.47kV
Distance from Substation to end of 3-phase (circuit miles)	3.68
Distance from 3-phase line (miles)	0.00
Pending/Current Applications in Queue (qty)	1

Proposed DER Size 1 (kW)	500
Distribution Line Upgrades	No
Distribution Substation Upgrades	No
Point of Contact Recloser Requirement	Yes
PPL Upgrades Leadtime for DER Size 1**	40-44 weeks
PPL Upgrades Cost Range for DER Size 1**	\$85,000

Proposed DER Size 2 (kW)	3,000
Distribution Line Upgrades	Yes
Distribution Substation Upgrades	Yes
Point of Contact Recloser Requirement	Yes
PPL Upgrades Leadtime for DER Size 2**	52-65 weeks
PPL Upgrades Cost Range for DER Size 2**	\$1,560,000

Engineer Comments	If the queued application cancels their project, this pre-app estimate would increase by approximately \$300,000.
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- High-level desktop review of current grid conditions.
- Two sizes included in the review.
- Does not reserve an interconnection queue position.

[DER Pre-app Link](#)

# DER Pre-application Process

## Optional interconnection site analysis





# Application Process Manual

When new service is required.

Click on checks to find the manual application based on system size. [DER Interconnection Application Guide](#).

**NOTE:** Should you require a change in system sizing, equipment used, etc., you **may** need to cancel your existing application, submit a new application and pay any associated fees.

## DER Interconnection Application Guide

		How to Apply		Additional Requirements <sup>3</sup>			Applications ≥ 500kW <sup>1</sup>			New Service
		Online Web Portal	Manual Submittal to <a href="mailto:DERApplications@pplweb.com">DERApplications@pplweb.com</a>	One-Line Diagram	Equipment Data Sheets	Site Plan	Customer Ownership Attestation	Net Energy Metering Rider	Parasitic Load Estimate	<a href="#">New Service Application</a>
PPL Customers Applying for Solar/Renewables	10 KW and under (Level 1)	<a href="#">✓ Click Here</a>		✓	✓	✓				
	10 kW - 499kW (Level 2, 3, 4) Existing Service	<a href="#">✓ Click Here</a>		✓	✓	✓	See note 2 below	See note 2 below		
	10 kW - 499kW (Level 2, 3, 4) New Service		<a href="#">✓ Click Here</a>	✓	✓	✓	See note 2 below	See note 2 below		<a href="#">✓ Click Here</a>
	500kW+ (Level 2, 3, 4) Existing Service	<a href="#">✓ Click Here</a>		✓	✓	✓	✓	<a href="#">✓ Click Here</a>	✓	
	500kW+ (Level 2, 3, 4) New Service		<a href="#">✓ Click Here</a>	✓	✓	✓	✓	<a href="#">✓ Click Here</a>	✓	<a href="#">✓ Click Here</a>
	Pre-Application		<a href="#">✓ Click Here</a>							

Notes:

1: Info on Applications ≥ 500kW

2: Only applicable for customers requesting Virtual Meter Aggregation with one or more Dependent accounts

3: A completed W-9 is required for customers applying for new service and creating a new account. Customers applying for the RS rate class will instead provide their social security number. This information is provided to the IRS for tax purposes.



PPL Electric Utilities



# Sample Manual Application – Interconnection Application

INTERCONNECTION APPLICATION			
For a Level 2, 3 or 4 Review – Applicants proposing to install generation approaching 2,000 kW or larger should contact the EDC for guidance in determining the appropriate application process.			
(To be filled out and submitted prior to installation)			
CUSTOMER GENERATOR CONTACT INFORMATION			
Legal Name and Mailing Address of Customer-Generator: (if an Individual, Individual's Name)			
Name: Fake Solar Project, LLC			
Mailing Address: 2 N 9th Street			
City: Allentown	State: PA	Zip Code: 18101	
Contact Person (If other than Above): John Smith			
Mailing Address (If other than Above):			
Telephone (Daytime): 717-555-1234		(Evening):	
Facsimile Number:		E-Mail Address: jsmith@fakeemail.com	
Alternative Contact Information: (if different from Customer-Generator above)			
Name: Smith Contractor, LLC			
Mailing Address: 2 N 9th Street			
City: Allentown	State: PA	Zip Code: 18101	
Telephone (Daytime): 717-555-1234		(Evening):	
Facsimile Number:		E-Mail Address: jsmith@fakeemail.com	
The Customer-Generator Facility's Information:			
Facility Address: 827 Hausman Road			
City: Allentown	State: PA	Zip Code: 18104	
Nearest Crossing Street: W Tilghman Street			
Electric Distribution Company ("EDC"): Select Utility PPL			
Account #:	New Service	Meter #:	New Service
Existing Service Voltage: ??? VAC	Existing Service Capacity: ??? Amps	3 Phase	
Current Annual Energy Consumption: ??? kWh	Estimated In-service Date: 01/01/2027		
Do you plan to export power? Yes			
If Yes, Estimated Maximum: 3000 kW <sub>AC</sub>		Estimated Gross Annual Energy Production: 4000000 kWh	
One-line Diagram Attached (Required): Yes		Site Plan Attached (Required): Yes	
Energy Source: Solar (PV)		Gross Generator Rating: 3000 kW <sub>AC</sub>	
Utility Accessible Disconnect or Lock Box: AC Disconnect near meter			
Requested Level of Review: Level 3 review		Type of Generation Equipment: Inverter	

L2-1



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# Sample Manual Application – Interconnection Application

**Equipment Installation Contractor:** Indicate by owner if applicable ☐

Name: Smith Contractor, LLC  
Mailing Address: 2 N 9th Street  
City: Allentown State: PA Zip Code: 18101  
Contact Person (If other than Above): John Smith  
Telephone (Daytime): 717-555-1234 (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: jsmith@fakeemail.com

**Electrical Contractor: (If Applicable)** Indicate if not applicable ☐

Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person (If other than Above): \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Consulting Engineer: (If Applicable)** Indicate if not applicable ☐

Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person (If other than Above): \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Application Fee:**

The Applicant shall deposit a not refundable application fee which is approved by the Pennsylvania Public Utility Commission and is listed on the EDC's Website. Depending on the level of review and nature of the energy generating equipment, additional study and review fees, as permitted by Pennsylvania Public Utility Commission Regulations may be required and are not a part of the aforementioned application fee.

Application Fee Enclosed: No Amount: \$6350

**Customer-Generator Insurance Disclosure:**

General Liability Insurance coverage is not required under the Pennsylvania Public Utility Commission's Regulations. However, the Customer still has responsibility and/or liability for any damage(s) or injury(ies) caused by the Customer-Generator Facility and/or the Customer's Interconnection Facilities. The Customer-Generator is advised to consider obtaining appropriate coverage.

L2-2

**Customer-Generator Signature:**

I hereby certify that to the best of my knowledge, all of the information provided in this Application is accurate.

Legal Name of Customer-Generator: Fake Solar Project, LLC  
Customer-Generator Signature: John Smith Date: 11/06/2024  
Printed Name: John Smith Title: Manager

**Customer-Generator Equipment Information for Inverter Based Systems**  
(May be applicable to a Level 2, 3 or 4 Review)

**DC Source information:**

Energy Source: Solar (PV)  
DC Source Rating: ??? kW<sub>DC</sub>  
Nominal DC Voltage: ??? V<sub>DC</sub>  
Ampere Rating: ??? Amps<sub>DC</sub>

**Inverter Information:**

Inverter Manufacturer: Chint Power System (CPS)  
Inverter Type: Grid Interactive  
Model Number of Inverter: SCH125KTL-DO/US-600  
Number of Units: 24  
Inverter Rating: 125 kW<sub>AC</sub>  
Voltage Rating: 600 Volts<sub>AC</sub>  
Ampere Rating: 127 Amps<sub>AC</sub>  
Power Factor: 99 %,   
Number of Phases: Three

L2-3



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# Sample Manual Application – Interconnection Agreement

**Level 2, 3 or 4 Interconnection Agreement**

This Interconnection Agreement ("Agreement") is made and entered into this 6th day of November 2024, by PPL Electric, ("Electric Distribution Company" or "EDC"), and Fake Solar Project, LLC ("Customer-Generator"), each hereinafter sometimes referred to individually as "Party" or both referred to collectively as the "Parties". In consideration of the mutual covenants set forth herein, the Parties agree as follows:

- 1) **Scope of Agreement** -- This Agreement sets forth the conditions under which the EDC and the Customer-Generator agree that one or more generating facilities as further described in Attachment A, with an installed nameplate gross capacity of 3000 kW ("Facility" or "Facilities") may be interconnected to the EDC's distribution system. This Agreement is applicable to interconnection requests governed by the rules and Regulations of the Pennsylvania Public Utility Commission.
- 2) **Construction of the Customer-Generator Facility.** The Customer-Generator may proceed to construct (including operational testing not to exceed 2 hours) the Customer-Generator Facility once the approval to install the Customer-Generator Facility has been received from the EDC. The Customer-Generator Facility shall be constructed in accordance with information provided in the Interconnection Application, IEEE 1547 and the Pennsylvania Public Utility Commission's Regulations.

The Applicant shall notify the EDC of any changes to the proposed Customer-Generator Facility that would be subject to the criteria for a Level 2, 3 or 4 review (E.G., Inverter Manufacturer/Model Number, Size, etc.).

Once an Interconnection Request is deemed complete, any modification to the proposed Customer-Generator Facility that would affect the application review criteria for a Level 2, 3 or 4 review that is not agreed to in writing by the EDC, shall require

L2-6

- 20) **Multiple Counterparts** -- This Agreement may be executed in two counterparts, each of which is deemed an original but all constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed by their respective duly authorized representatives.

PPL Electric Utilities	Customer-Generator
BY: _____	BY: <u>John Smith</u>
NAME: _____	NAME: <u>John Smith</u>
TITLE: _____	TITLE: <u>Manager</u>
DATE: _____	DATE: <u>11/06/2024</u>

L2-13



PPL Electric Utilities

# Sample Manual Application – Attachment A

ATTACHMENT A

DESCRIPTION OF FACILITY

For a Level 2, 3 or 4 Review Interconnection Agreement <sup>1</sup>

CUSTOMER-GENERATOR CONTACT INFORMATION

Legal Name and Mailing Address of Customer-Generator: (if an Individual, Individual's Name)

Name: Fake Solar Project, LLC

Mailing Address: 2 N 9th Street

City: Allentown State: PA Zip Code: 18101

Contact Person (if other than Above): John Smith

Mailing Address (if other than Above):

Telephone (Daytime): 717-555-1234 (Evening):

Facsimile Number: E-Mail Address: johnsmith@fakeemail.com

Alternative Contact Information: (if different from Customer-Generator above)

Name:

Mailing Address:

City: State: Zip Code:

Telephone (Daytime): (Evening):

Facsimile Number: E-Mail Address:

The Customer-Generator Facility's Information:

Facility Address: 827 Hausman Road

City: Allentown State: PA Zip Code: 18104

Account #: New Service Meter #: New Service

Do you plan to export power? Yes, Significant annual export/No net-metering/IPP

If Yes, Estimated Maximum: 3000 kW<sub>AC</sub>, Estimated Gross Annual Energy Production: 4000000 kWh

One-line Diagram Attached (Required): Yes Site Plan Attached (Required): Yes

Energy Source: Solar (PV) Gross Generator Rating: 3000 kW<sub>AC</sub>

Utility Accessible Disconnect or Lock Box: AC Disconnect near Meter

<sup>1</sup> Customers proposing to install generation greater than 2,000 kW are required to contact their EDC for the appropriate application procedures.

I.2-13



# Sample Manual Application – Net Energy Metering Rider

PPL EU

Net Energy Metering Rider – Application for Service<sup>1</sup>

Customer's Name: Fake Solar Project, LLC

Service Point Address: 827 Hausman Road

City: Allentown State: PA Zip: 18104

Account Number: New Service

Contact Person: John Smith

Telephone Number: 717-555-1234

Address: 2 N 9th Street

City: Allentown State: PA Zip: 18101

Email Address: jsmith@fakeemail.com

This application is for electric service under PPL EU's Net Energy Metering Rider for the above customer ("Customer"). The Customer qualifies for the Net Energy Metering Rider since its generator of electricity uses as its fuel approved under the Alternative Energy Portfolio Standards Act No. 2004-213 ("Act"), solar photovoltaic, solar thermal, wind power, hydropower, geothermal, biologically derived methane gas, biomass energy, coal mine methane, waste coal, demand-side management, municipal solid waste, by-products of the pulping process and wood manufacturing process, integrated combined coal gasification technology or a fuel cell/distributed generation that is located on the Customer's premises and operates in parallel with the Company's transmission and distribution systems and is intended primarily to offset part or all of the Customer's requirements for electricity.

The Customer-generator facility qualifies for the Rider as it is a Solar (PV) type generator, which is one of those qualifying facilities identified in the Rider and restated above. Total rated generating capacity of the Customer-generator to be used and billed under the Net Energy Metering Rider, is 3000 kW (Not to exceed 50 kW residential, 3 MW non-residential and up to 5 MW under certain conditions as specified in the Act).<sup>2</sup>

The Customer acknowledges that it has read the Net Energy Metering Rider and agrees to all terms and conditions contained therein including without limitation those specified in the Company's interconnection tariff and the Company's interconnection requirements. The

<sup>1</sup> When finished completing form, save with a new name. Place cursor on a spot other than a dropdown list to print.

<sup>2</sup> In the event this host account intends to make excess energy available to other qualifying accounts under the "Virtual Meter Aggregation" provisions of the Rider, the account information required on the Addendum must be supplied for each additional account.

1

PPL EU Net-metering\_Rider\_-\_Application\_for\_Service Revised 08012019

customer agrees not to operate its generator in parallel with the Company's electrical system without specific approval in accordance with the Company's interconnection requirements.

The Customer understands and agrees that a meter, which is capable of registering the flow of electricity in each direction, must be in service at the facility. If a meter is not in service with this capability, the Customer must submit a written request to PPL EU, and provide reasonable time for installation and the EDC will not charge the Customer generator a fee or other type of charge unless the fee or charges would apply to other customers. (The customer-generator is responsible for the customer charge, demand charge and other applicable charges under the applicable Rate Schedule.)

The Customer acknowledges and agrees that operation of Customer's generation facility is intended primarily to offset part or all of Customer's electricity requirements in accordance with the Net Energy Metering Rider. Customer further acknowledges and agrees that excessive generation by the Customer's generation facility, as determined solely by the Company, is cause for disqualification for service under the Net Energy Metering Rider.

Requested By:

John Smith

Customer Name

*John Smith*

Authorized Signature

11/06/2024

Date

Approved By:

Company Signature

Name (Typed of Printed)

Date

Rejected:

Company Signature

Name (Typed of Printed)

Reason for Rejection

Date

2

PPL EU Net-metering\_Rider\_-\_Application\_for\_Service Revised 08012019

# Sample Manual Application – Net Energy Metering Rider

<b>PPL EU</b>		Addendum
<b>Net Energy Metering Rider – Application for Service</b>		
<b>Virtual Meter Aggregation – Additional Account Information <sup>1</sup></b>		
Host Account Customer's Name: <u>Fake Solar Project, LLC</u>		
Host Account Number: <u>New Service</u>		
Dependent Account Customer's Name: <u>None</u>		
Service Point Address: _____		
City: _____ State: _____ Zip: _____		
Account Number: _____		
Distance from Host Account Property: _____		
Dependent Account Customer's Name: _____		
Service Point Address: _____		
City: _____ State: _____ Zip: _____		
Account Number: _____		
Distance from Host Account Property: _____		
Dependent Account Customer's Name: _____		
Service Point Address: _____		
City: _____ State: _____ Zip: _____		
Account Number: _____		
Distance from Host Account Property: _____		
Dependent Account Customer's Name: _____		
Service Point Address: _____		
City: _____ State: _____ Zip: _____		
Account Number: _____		
Distance from Host Account Property: _____		
<small><sup>1</sup> Account information must be supplied for each account eligible for "Virtual Meter Aggregation" under the Rider. Attach additional pages if necessary.</small>		
3		<small>PPL EU Net-metering_Rider_-_Application_for_Service Revised 08012019</small>



# Sample Manual Application – New Primary/Secondary Service Application

## To Submit this Application

- 1. Please save the PDF to your computer
- 2. Email this PDF to [businessaccounts@pplweb.com](mailto:businessaccounts@pplweb.com)
- 3. Print a copy for your records (Print Button)

Type of Request	
<input checked="" type="checkbox"/> <b>New - Permanent</b> (Needs to establish a new bill account and meter)	<b>Requested In-Service Date:</b> (Date when all connected loads provided in this application will be in service):  01 / 01 / 2027
<input type="checkbox"/> <b>New - Temporary</b> (Construction Power etc.)	
<input type="checkbox"/> <b>Relocation</b> (Relocation of PPL facilities, see page 3)	
<input type="checkbox"/> <b>Change</b> (To an existing service and/or meter)	

Construction Status	
<input type="checkbox"/> In-Progress <input type="checkbox"/> Completed <input checked="" type="checkbox"/> Not Yet Started – Date when work is expected to start:	06 / 01 / 2024

Customer Information			
Customer Name:	Fake Solar Project, LLC	Phone #:	717-555-1234
Email:	jsmith@fakeemail.com		
Service Address:	827 Hausman Road	City/State/ZIP:	Allentown, PA 18104
Mailing/Billing Address:	2 N 9th Street, Allentown, PA 18101	Same as Service Address?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
This form can be signed by NEW customers to complete the ratepayer confirmation that is required for a new service. By signing below, the customer is accepting responsibility for monthly electric service billing.			
Signature of Customer:		Date:	11 / 06 / 2024
Print Name:	John Smith		

Project Contact Information					
<input checked="" type="checkbox"/> Customer <input type="checkbox"/> General Contractor <input type="checkbox"/> Electrical Contractor	Date Submitted	11 / 06 / 2024			
Contractor ID:		Email:	jsmith@fakeemail.com		
Full Name:	John Smith	Cell Phone:	717-555-1234		
Company:	Smith Contractor, LLC	Address:	2 N 9th Street		
City:	Allentown	State:	PA	Zip:	18101

Business/Building Information					
Type of Business (Description):	Solar Array	Daily Hours of Operation:	N/A		
Building Square Feet:	N/A	# Of Stories in Building:	N/A		
Will There Be an Addition to the Building?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Will The Existing Point of Delivery (Meter Location) Remain the Same?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A				
Existing Building Sq. Ft:	N/A	Sq. Ft Being Added:	N/A	Total Sq. Ft:	N/A

Existing Service				
<input checked="" type="checkbox"/> Not applicable (New Service Only)				
PPL Electric Account #:		and/or	Meter #:	

Relocation of PPL Electric Utilities Facilities Information			
<input checked="" type="checkbox"/> Not Applicable			
Facilities to be Relocated:			
Are these Transmission facilities (steel poles or associated wires)? :	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Relocation Address:			
Reason for Relocation:			
Relocation is at property owner's request:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date cost estimate is needed by:	
Comments:			

Primary Service Information		
Nearest PPL Electric Utilities Pole/Grid #: (Latitude/Longitude is also acceptable)	40.591982, -75.555310 <small>Example of PPL Electric's pole/grid number: 12345N54321 or 56789S98765</small>	
New Service Size (Amps):	A/C Required (Fault Current)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> 3-Phase, 7,200/12,400 Volts, 4-Wire	<input type="checkbox"/> 3-Phase, 69,000 Volts or Higher (Transmission)	
<input type="checkbox"/> 1-Phase, 7,200 Volts	<input type="checkbox"/> Alternate Supply Requested (Charges will apply)	



# Sample Manual Application – New Primary/Secondary Service Application

Metering

Select One of the Options Below:

☒ Pole Mounted (12 kV) or H Frame (69 kV)

☐ Switchgear (PPL EU Approval of termination and metering compartments required)

Protection and Transformer Information

Proposed Customer Protection: ☐ Fuse ☒ Breaker

Refer to the [Point of Contact Requirements](#) for High Voltage Facilities

Customer Transformation Information –  
Include the total (new and remaining) transformation of facility

Transformer Number	Transformer Size (kVA)	%R	%X	Voltages	
1	????				
2					
3					
4					
5					

Connected Electrical Load

Please indicate all connected loads in the table below.  
If information is missing or incomplete, your application will **not** be processed and could cause delays in providing service to your facilities. PPL will perform design based on provided loads not total transformation.

Load Description	Total Net Load Addition	Equipment Description
Lighting - Indoor	kW	
Lighting - Outdoor	kW	
Motors (excludes HVAC)	HP	
Miscellaneous (*Specify Equipment)	kW	
Cooking	kW	
Water Heating / Tankless Water Heater	kW	
Process Heating	kW	
Electric Vehicle Chargers (See Page 5)	kW	
Refrigeration	kW	
Space Heating	kW	
Air Conditioning	TONS	
Welders (Supply Spec Sheets)	kW	
Other (Specify Equipment)	3000 kW	125 kW x 24 Solar Inverters



# Sample Manual Application – Customer Attestation

We are looking for a document on company letterhead that states who will own the DER system.

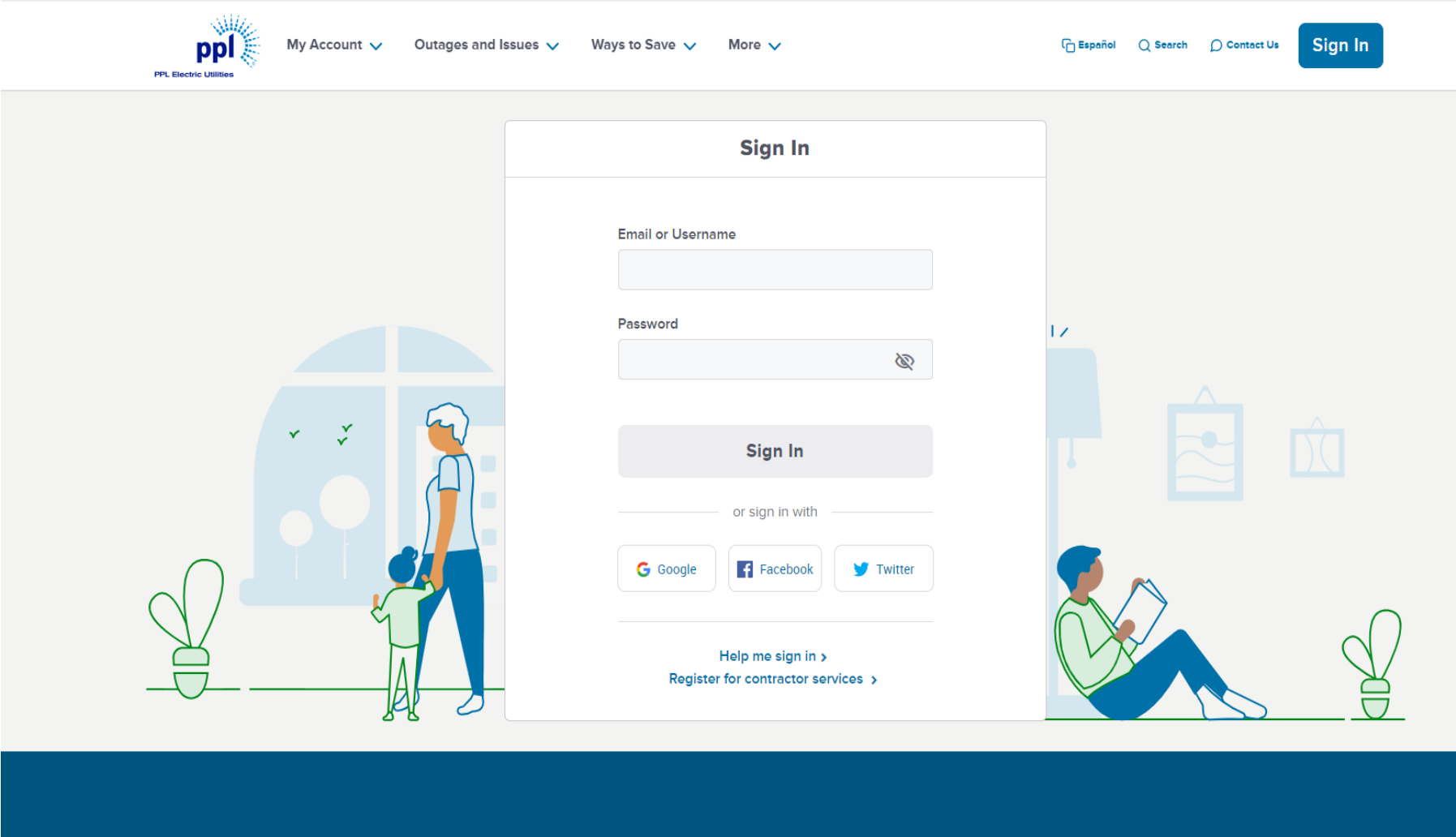
Sample language:

I, *Name*, am the *Position* for *Business Entity*, which has entered into a solar installation contract with *Developer (Customer)* to design and build a *X,XXX kW* AC sized solar project located at *Location*.  
I confirm that *Project Name, LLC* will be the owner and operator of the Solar PV/distributed generation system that will interconnect to the distribution grid.

# Customer vs. Developer Access

- Developers can complete the online application for their customers.
  - Developers must register for contractor account access first.

[Contractor Services Online Portal – Distributed Energy Resources \(DER\) Work Requests](#)



The screenshot displays the PPL Electric Utilities website header with the logo and navigation links: My Account, Outages and Issues, Ways to Save, and More. On the right, there are links for Español, Search, Contact Us, and a Sign In button. The main content area features a large illustration of a family (a man, a woman, and a child) standing in front of a house, with a potted plant to the left. To the right of the illustration is a 'Sign In' form. The form includes fields for 'Email or Username' and 'Password', a 'Sign In' button, and a link for 'or sign in with'. Below these are social media login options for Google, Facebook, and Twitter. At the bottom of the form, there are links for 'Help me sign in >' and 'Register for contractor services >'. To the right of the form is another illustration of a person sitting on the floor, reading a book, with a potted plant to the right.

**Sign In**

Email or Username

Password

**Sign In**

or sign in with

Google Facebook Twitter

Help me sign in >  
Register for contractor services >

# Application Process Online

For existing customers.

Links to:

- [Application Process](#), which includes a video
- [DER Interconnection Application Guide](#).

**NOTE:** Should you require a change in system sizing, equipment used, etc., you may need to cancel your existing application, submit a new application and pay any associated fees.

## START YOUR RENEWABLE ENERGY PROJECT WITH PPL'S ONLINE APPLICATION

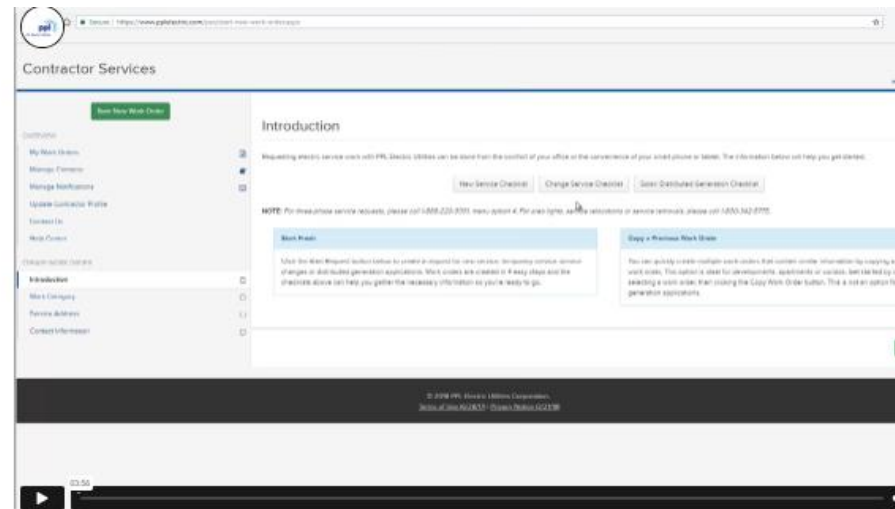
Welcome to PPL's Renewable Energy Connection, an industry-leading online portal where you can easily apply to connect your solar panels or other distributed generation projects. There are two steps to connecting your distributed generation project to the grid:

1. **Online application:** The application, which should be submitted before installation and must be approved by us, will provide us with details about your project.
2. **Certification of Completion:** Once your application is approved, install the system and fill out the Certificate of Completion online.

Our online application:

- Streamlines the application process.
- Allows you to upload supporting documents immediately for possible Fast Track approval.
- Helps prevent data errors that could delay approval.
- Provides email notifications on your application status.
- Gives you a work order number and status immediately.

Submitting an application through our Renewable Energy Connection Web Portal (Please note: references in the video to "Appendix A" are no longer applicable to this process.)



## Creating a Contractor Services Account



# Net Metering

## Net Metered Distributed Energy

### REQUIREMENTS, TIMELINE AND CHECKLISTS TO CONNECT TO THE PPL ELECTRIC UTILITIES POWER GRID

When you're installing solar panels, CHP, biomass, or another type of distributed energy resource (DER), PPL Electric Utilities is here to help you connect to the power grid. We recommend applying at least 6 months before interconnection service is needed.

For installations under 25 kilowatts (kW; inverter nameplate), you'll hear from PPL within 3-4 weeks of submitting a completed and signed application. For all other systems, additional engineering reviews and field visits may be required. In addition, for systems 500 kW or larger, PPL must submit a net-metering recommendation to the Pennsylvania Public Utility Commission. Please see our [PUC Applications Requirement page](#) for more information on what is required for that recommendation. For all DER projects, please see the full process outlined below.

### Application

Application Submission – Applications with existing services should be submitted online on our "[Contractor Services Online Portal – Distributed Energy Resources \(DER\) Work Requests](#)." When applying, you'll need the following documents:

- One-line diagram, including communications and existing distribution facilities.
- Site plan, including geographic features.
- Equipment data sheet.
- For systems 500 kW or larger, see [additional documentation requirements](#).

The level of review and the application fee will depend on the type and size of the proposed DER. [Please visit the Pennsylvania Code and Bulletin website for Interconnection application fees](#). The following table below is a breakdown of the different levels and associated application fees:

Levels	Brief Description	Base Fee	Per kW Fee
1	Certified inverter-based installations of 10 kW or less	\$100	None
2	Certified inverter-based installations greater than 10 kW but 2000 kW or less.	\$250	\$1/kW
3	Non-inverter-based installations of any size. Certified inverter-based installations larger than 2000 kW.	\$350	\$2/kW
4	Installations that do not qualify for Levels I and II and do not export power.	\$350	\$2/kW

[Download Brochure](#)

**Be sure to double-check your application for accuracy.** Once submitted, technical details cannot be modified or altered by PPL Electric. Should you require a change in system sizing, equipment used, etc., you will need to cancel your existing application, submit a new application, and pay any associated fees.

If you have questions regarding your application and new services, please contact the following:

- Systems less than 25 kW, single-phase, email [EUSolarPower@pplweb.com](mailto:EUSolarPower@pplweb.com).
- Systems 25 kW and greater, all three-phase, but less than 250 kW, email [BusinessAccounts@pplweb.com](mailto:BusinessAccounts@pplweb.com).
- Systems 250 kW and greater, email [DERApplications@pplweb.com](mailto:DERApplications@pplweb.com).

## [Net-Metered-Distributed-Energy](#)

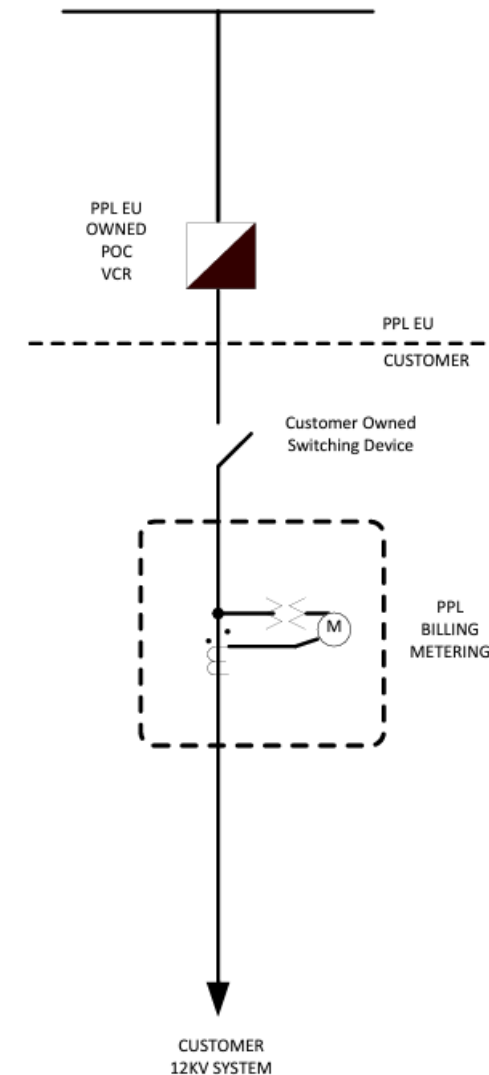


PPL Electric Utilities



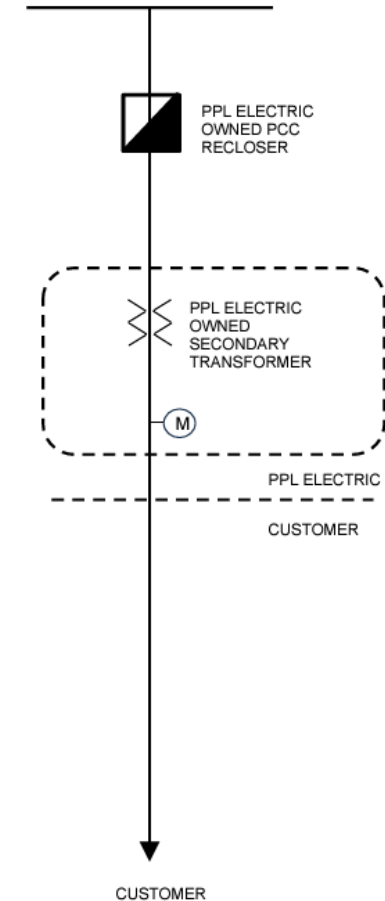
# Primary Application and Drawing

- Customer-Owned Transformation
- LP4 Rate Class
- Customer owned switch ahead of PPL Electric Meter
- Show customer owned transformer

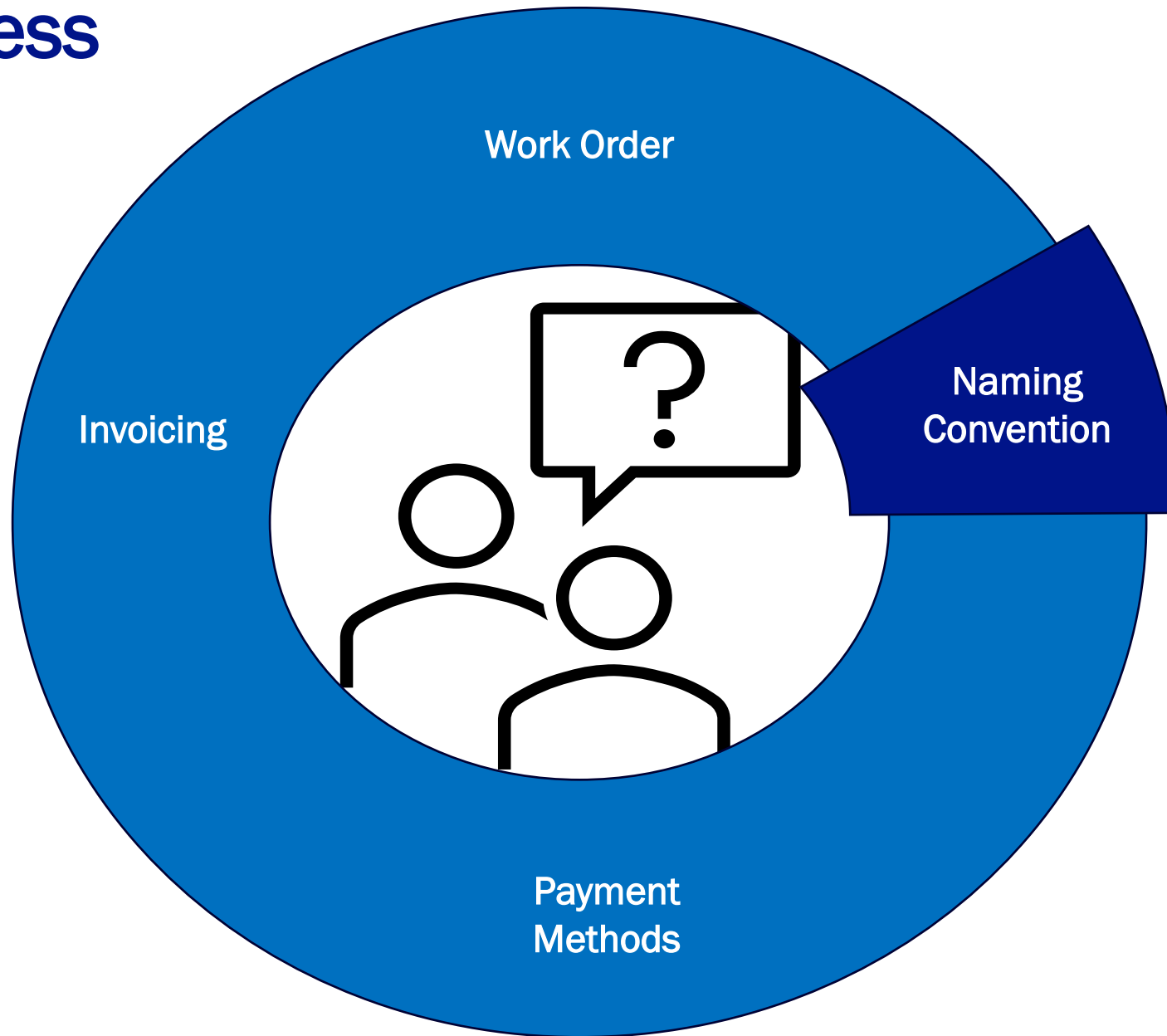


# Secondary Application and Drawing

- Utility-Owned Transformation
- GS3 Rate Class
- Customer owned disconnect switch after meter
- New 90% loading standard



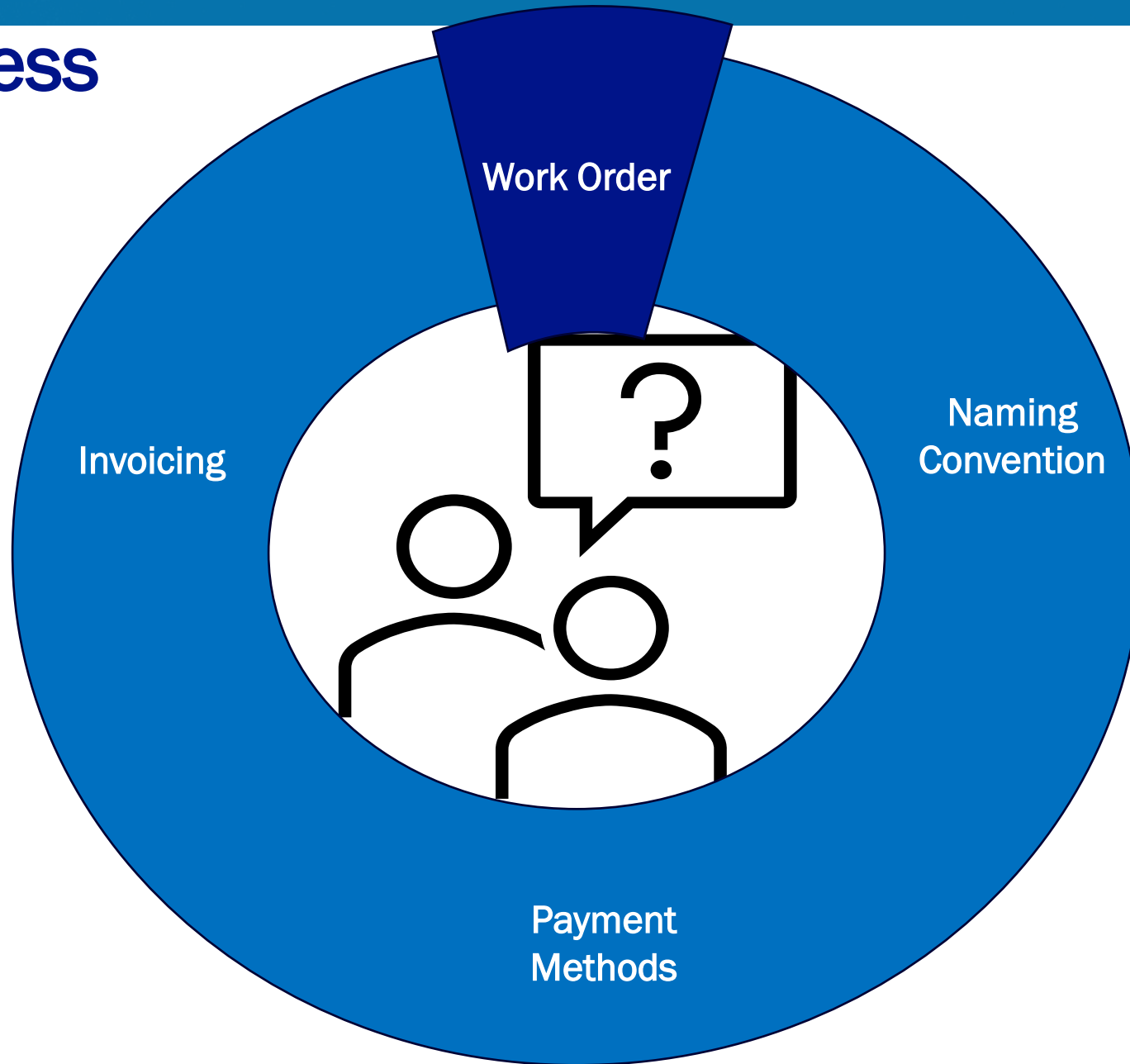
# Process



Many DER projects have **similar names for multiple sites**. As such, a naming convention is necessary to uniquely identify each site.

- **Project Site Name:** (typically an LLC name from the Customer Attestation) Electric Service Name. Also, include the name of the developer.
- **Project Address:** (Physical Street Name/#. Must supplement grid coordinates, if provided).
- **Additional Identifiers** (as required): One or more of the following: Phase #, Site #, Lot #, Nameplate kW Size, Pod #, etc.

# Process



## Online

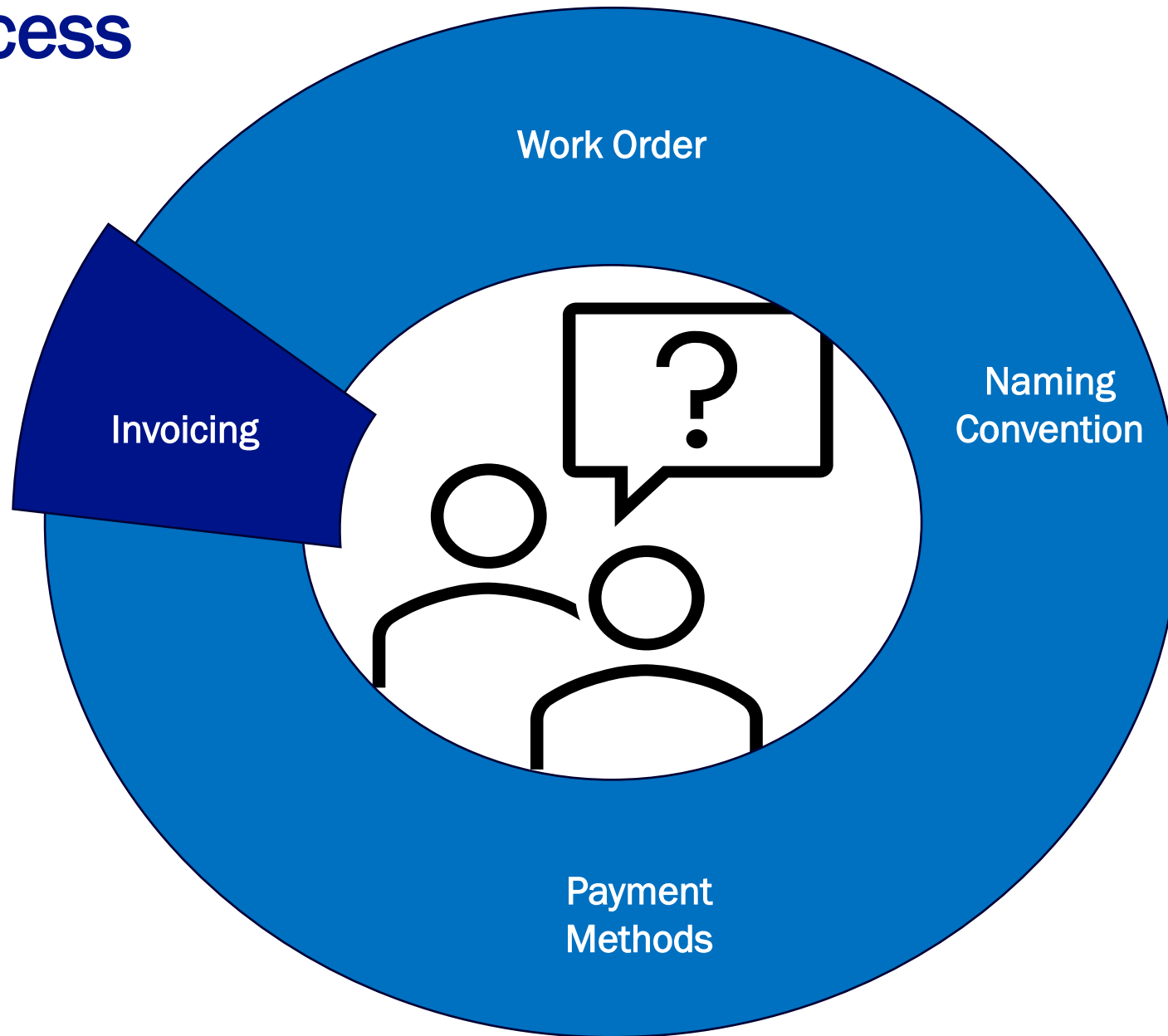
- Created once the application is submitted.
- Emails are sent with the work order number and invoice for the interconnection application fee.

## Manual

- Business Accounts Service team (BAS team) will create the work order along with the new service work order.
- Our DER interconnection specialist will create an invoice and send an email with the work orders.

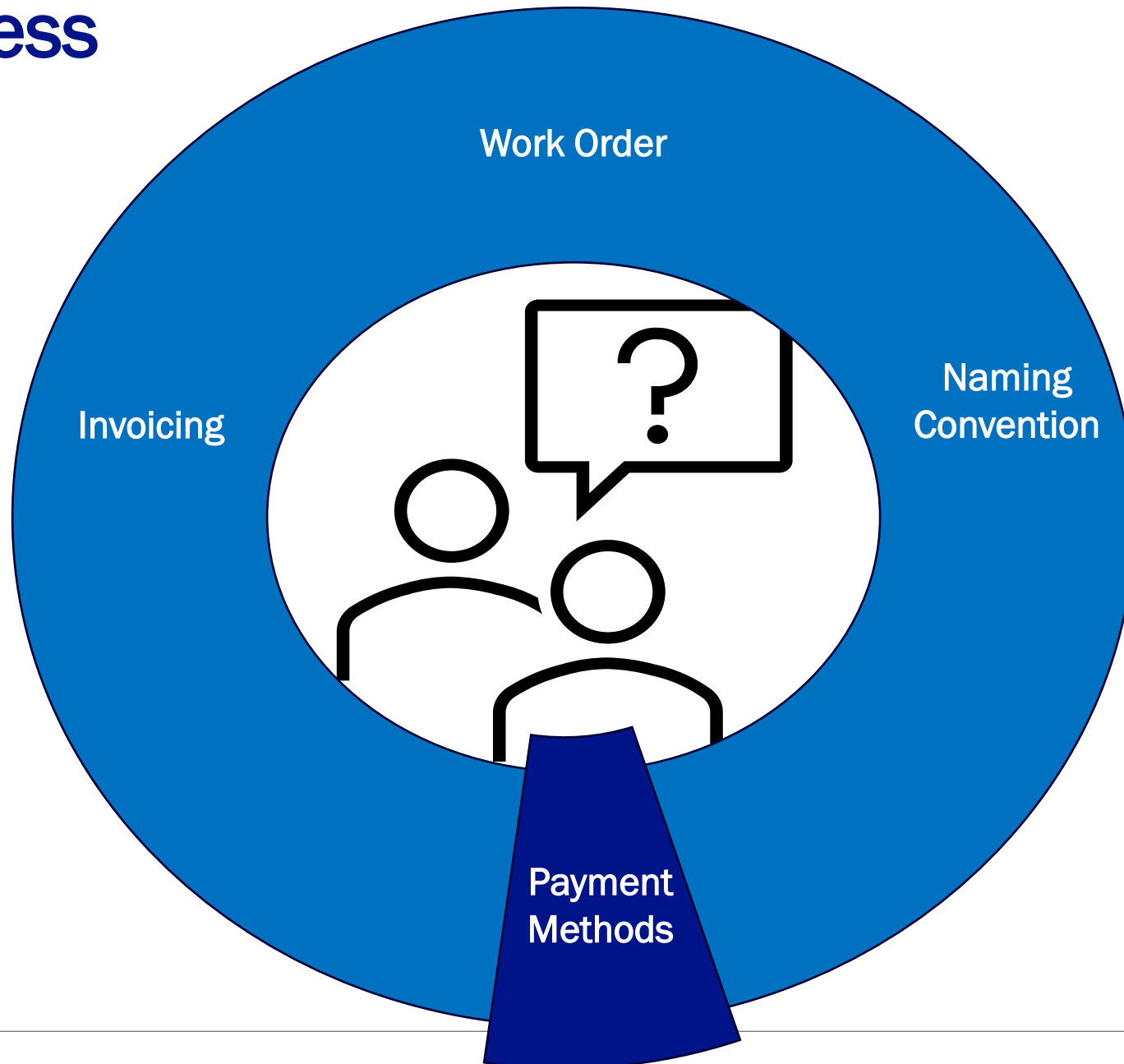


# Process



Difference between applications **received on or after January 1, 2024,** and those received **before this year.** Details are on our website.

# Process



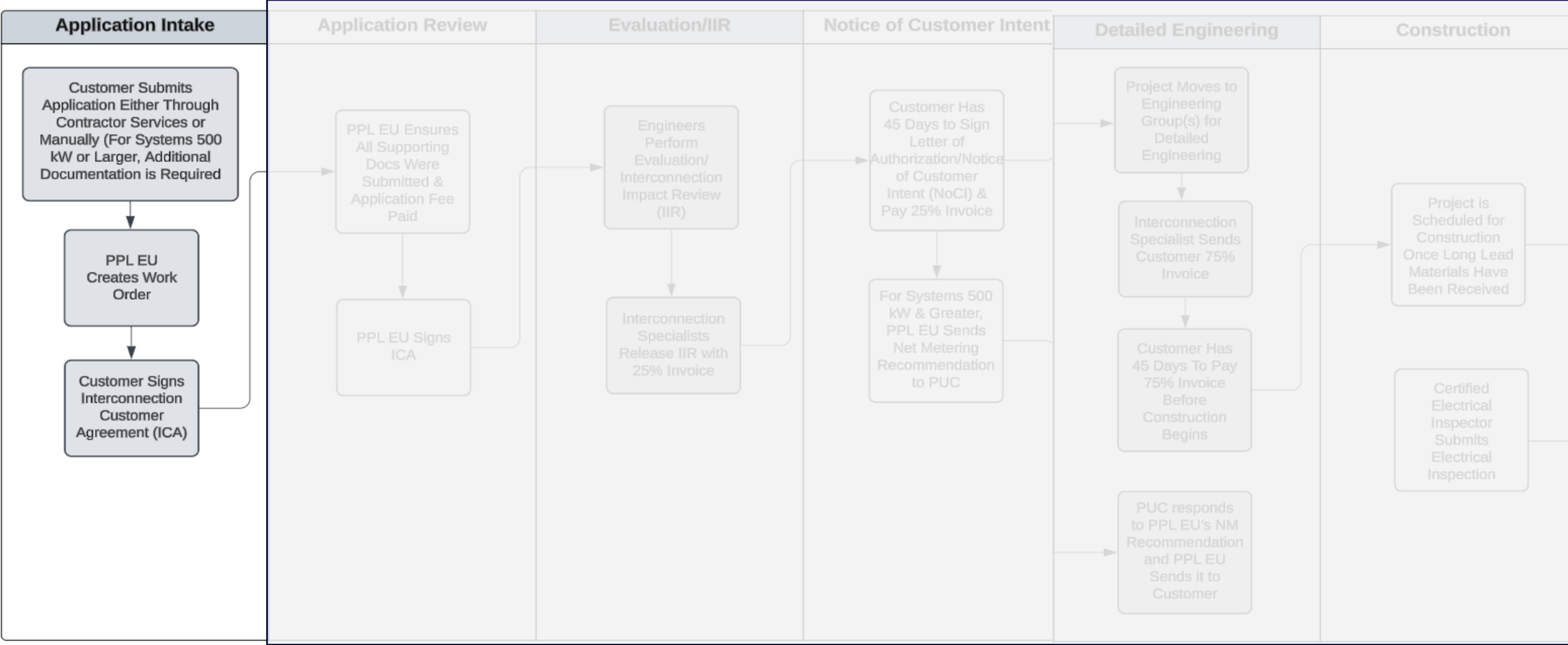
Payments must be made by **check** and mailed to:  
PPL Electric Utilities  
PO Box 419054  
St Louis, MO 63141-9054

**Overnight payments** must be made out to “PPL Electric Utilities” and sent to:  
Firstech  
Attn: Lockbox PFC  
12300 Olive Blvd  
Creve Coeur, MO 63141

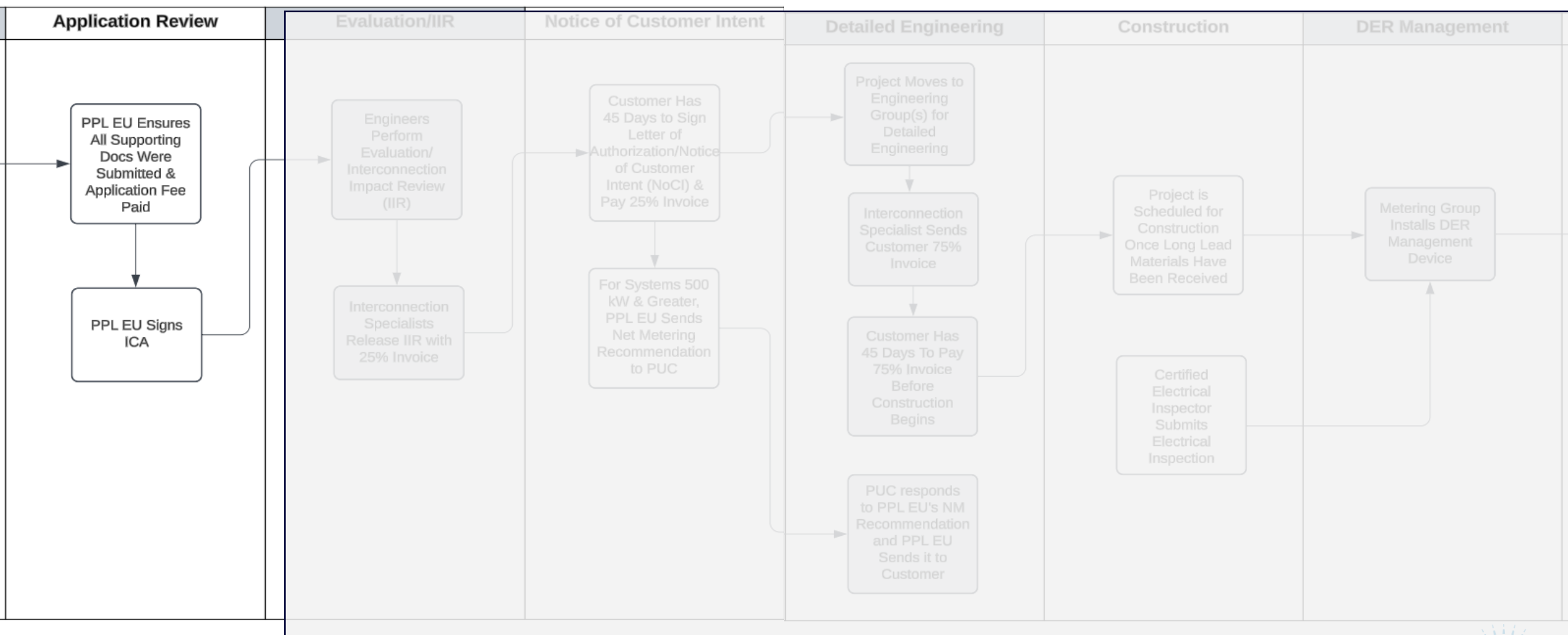


PPL Electric Utilities

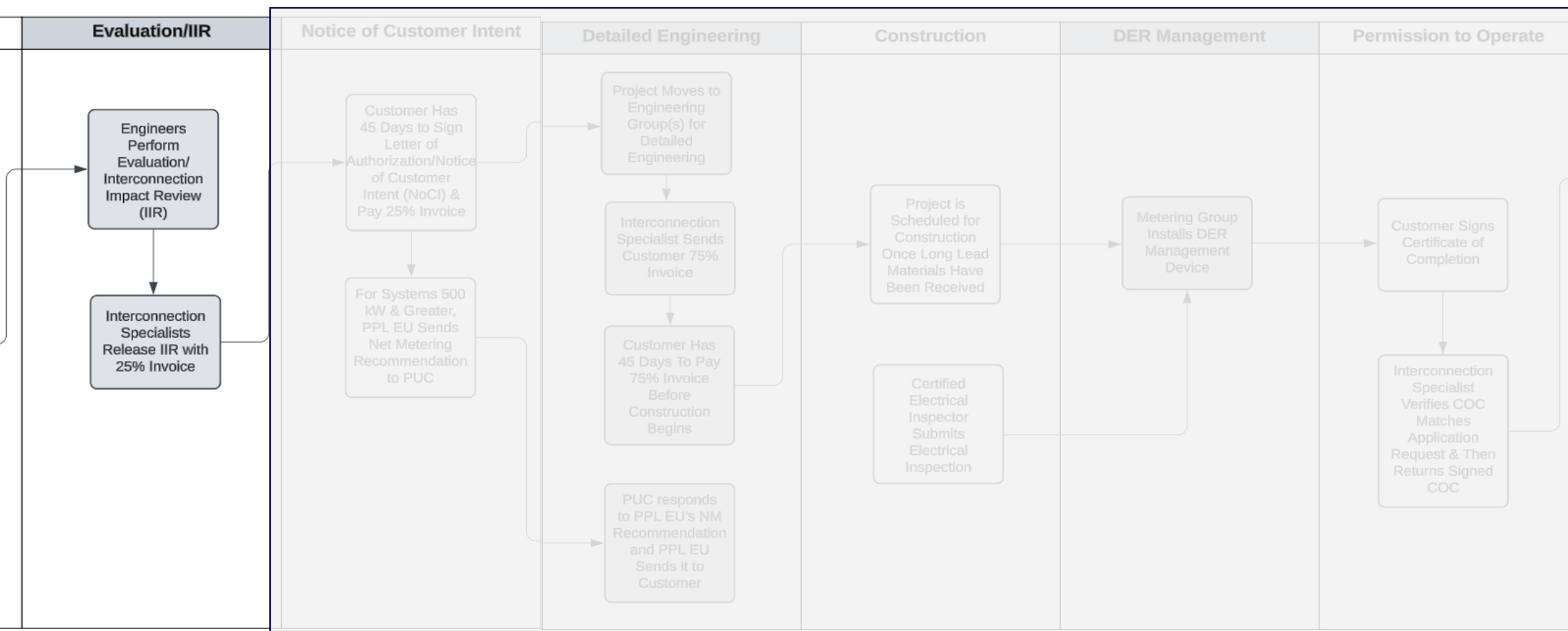
# Project Life Cycle



# Project Life Cycle

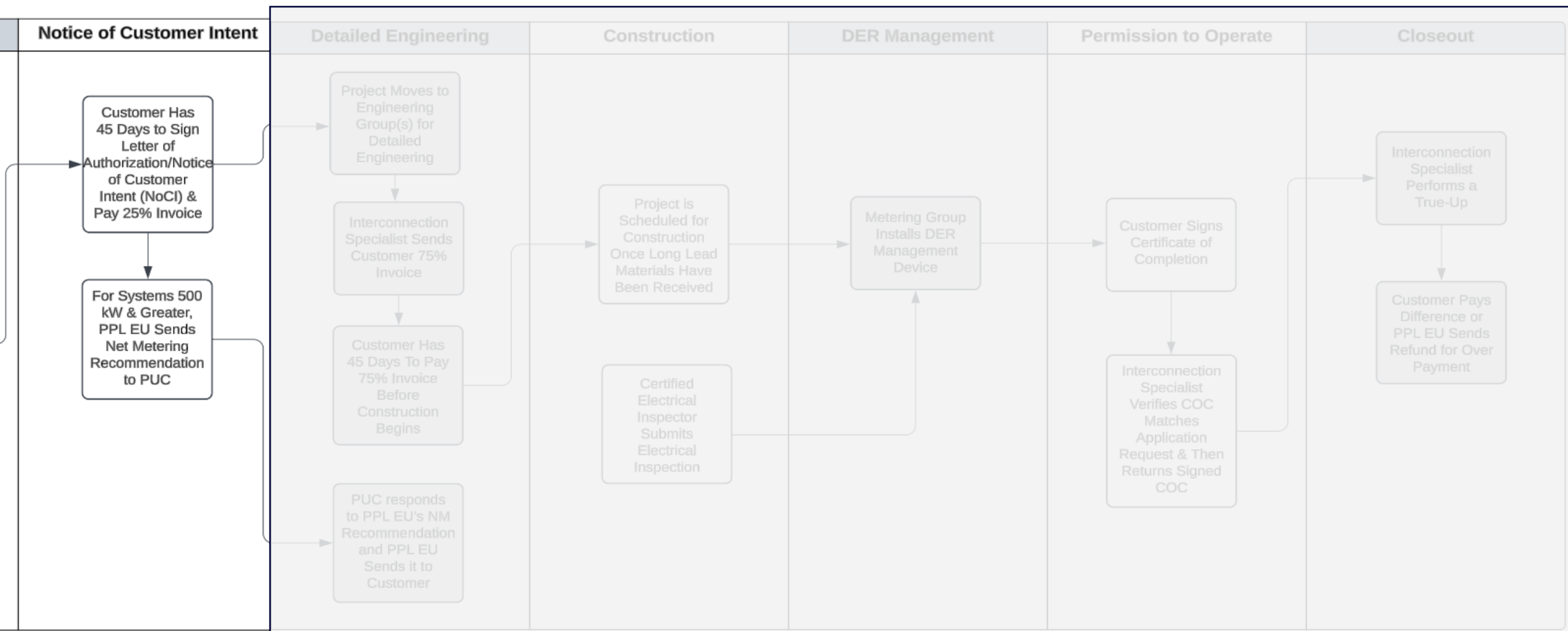


# Project Life Cycle

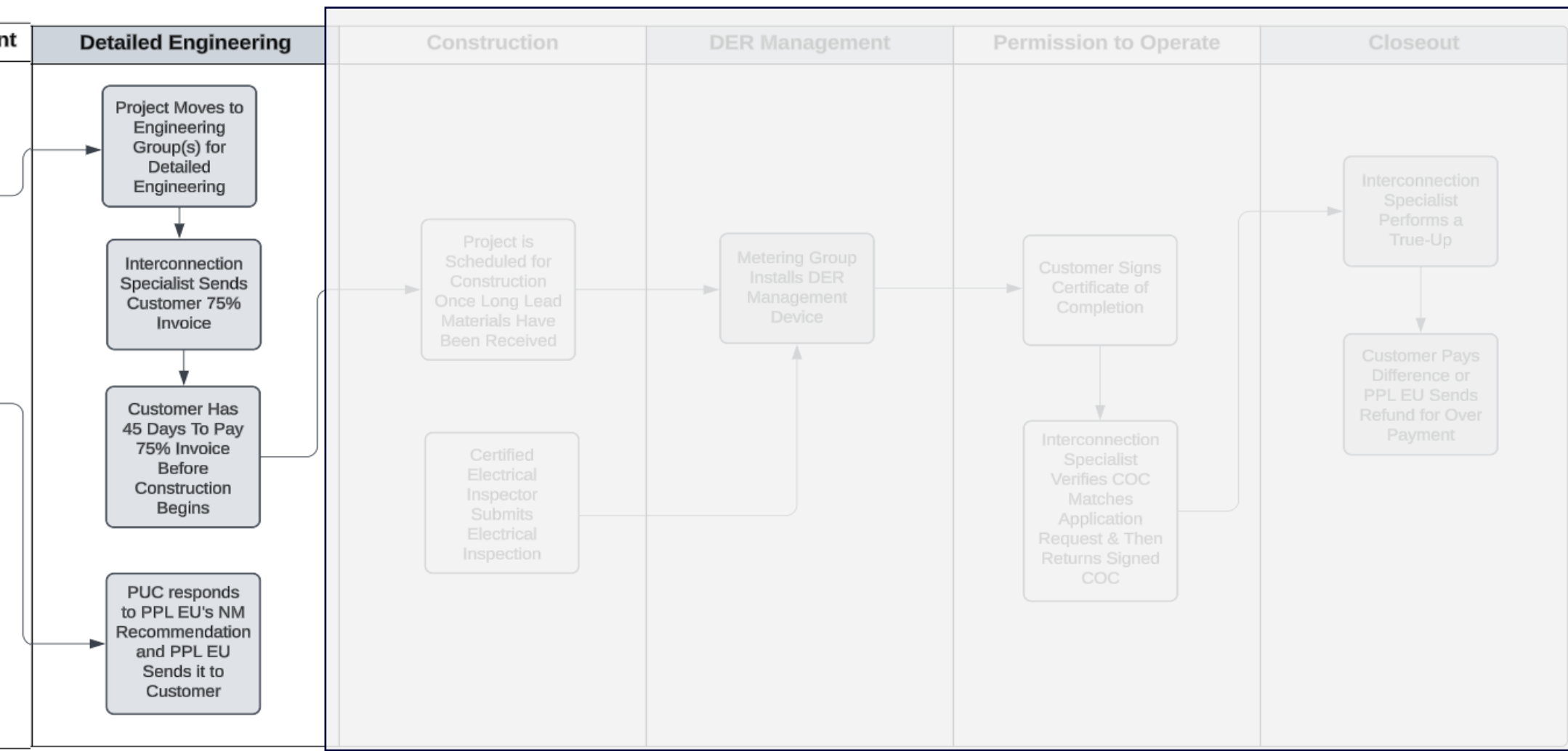




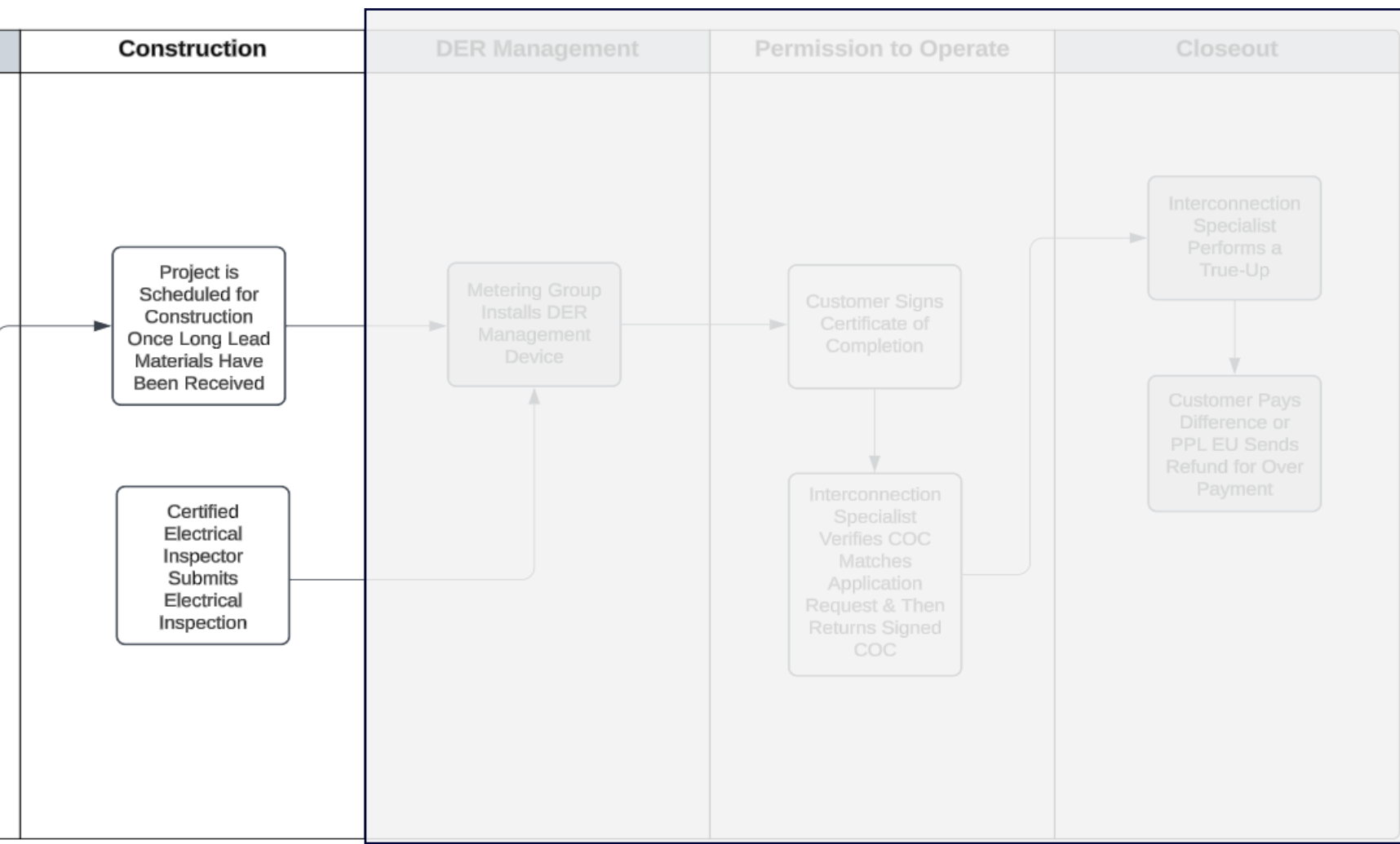
# Project Life Cycle



# Project Life Cycle



# Project Life Cycle



# Project Life Cycle

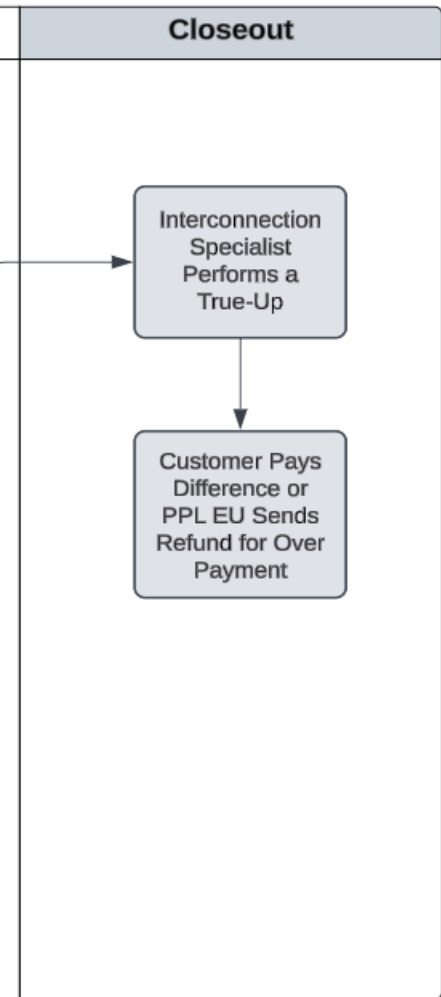


# Project Life Cycle

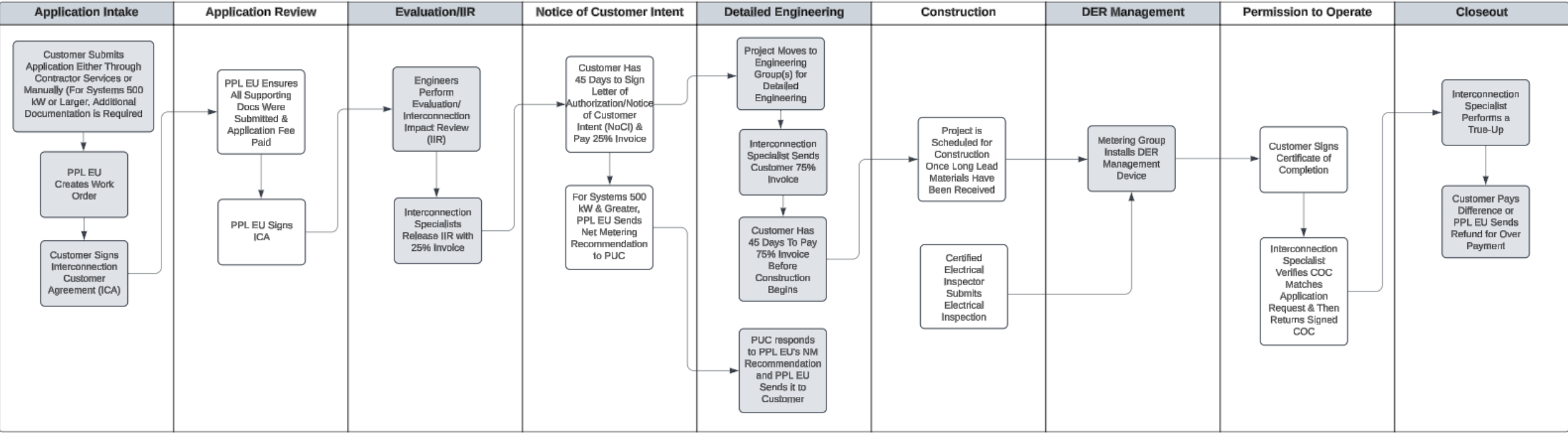




# Project Life Cycle



# Project Life Cycle



# Regulatory Review - Overview

- If your kW nameplate in this application is sized at 500 kW or greater, there are regulatory documents required for PPL Electric to prepare a Net Metering recommendation to the PA PUC.
  - And, if this is your first submission, submit **ONE application**, which you can later use as a template.
  - Also, if it is a new service, submit a manual DER application in **ONE** submittal to DERApplications@pplweb.com only.
- And there are other considerations that benefit you and PPL Electric Utilities.
  - In all cases, it is important to note that any documents that are incomplete or inaccurate will be returned and will delay your project.
  - There is no need to rush. Regulatory reviews are not initiated until ALL documents are received.
  - Links are provided at the end of this presentation.
  - Label the documents in a way that clearly define the contents.
- Finally, please note that multiple or piecemeal submissions become unmanageable and will delay your project, which may require a new application along with the appropriate fee.
  - Multiple submissions require scrubbing of previous documents that are updated.
  - Information on the following pages are included in your project "Welcome" package via email.

# Regulatory Review - Site Plan, One Line Diagram and PLE

## Appendix A: (Site Plan/One-Line Diagram) - include acronym, i.e. SP/OLD

- Provide the overall property layout/street access including nearest cross street in each direction, identify:
  - Location of the service transformer and DER AC disconnect device.
  - Location of generation (both existing and new), inverters.
  - Looking ahead: Battery Energy Storage System (BESS), EV charger, etc.
- Energy sources described on the above Site Plan document. In addition, identify the:
  - Customer/utility meter and load centers, if applicable.
  - Disconnect switch and note if it is lockable with a visible break when required.
  - Connection to other customer's electrical system.
  - Behind the Meter Transformation sizing kVA.

You can find this information online at the following web resource:

[PUC-Requirements](#)

## Appendix B: Parasitic Load Estimate (PLE)

- In a Word document, using the applicant's letterhead, provide the annual parasitic load (kWh) estimate with the calculation and assumptions for that DER system site. It may include but is not limited to:
  - Customer step-up transformer losses.
  - Recloser Cabinet.
  - Data Acquisition System.
  - Inverter System night-time drain.
  - Single axis solar tracking system.
  - LED lights on a motion detection sensor estimate.
  - Surveillance camera energy use estimate.

# Regulatory Review – ICA, IA, and NEMR– ICA, IA, and NEMR

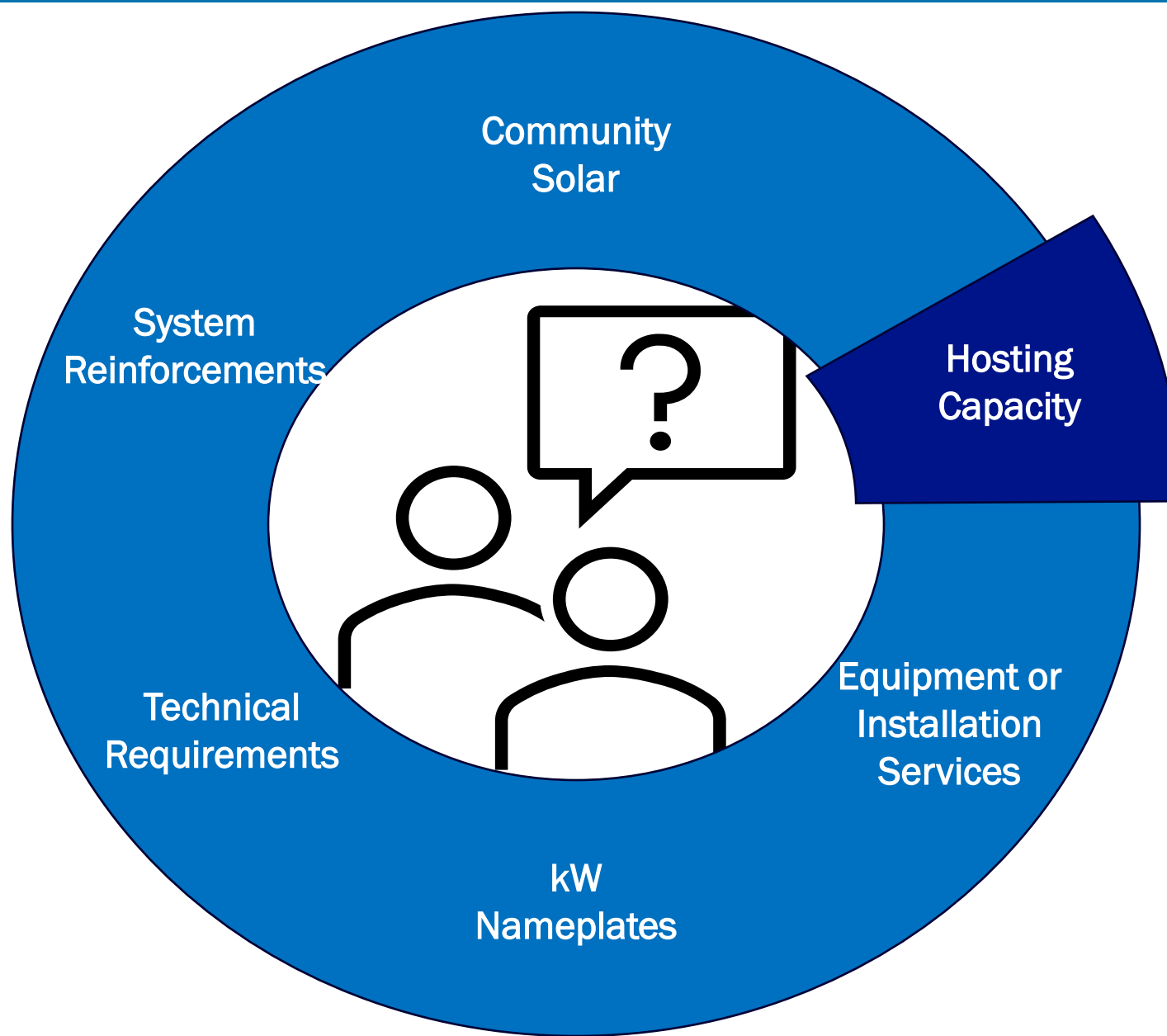
- Appendix C: Interconnection Application (ICA)/Interconnection Agreement (IA)
  - Customers with existing services submit through the contractor services online portal.
  - Customers with new services submit manually to the Interconnections Specialist at [DERApplications@pplweb.com](mailto:DERApplications@pplweb.com).
- Appendix D: Net Energy Metering Rider (NEMR)
  - This document is required for ALL applications. Please complete all three pages.
  - However, if one or more dependent accounts are listed, provide the following:
    - A tax parcel map showing the distance between the host and dependent account(s) boundaries.
    - Evidence that the Host has **site control** (owns or leases and operates) of the dependent account/assets.
    - Understand how the excess energy is applied to one or more Dependent (Satellite) accounts.
- Customer Attestation (CA):
  - Finally, the following documentation is required as reference material:
    - It is not part of the PUC Filing packet.
    - For customer-owned or third-party owned systems, evidence of DER ownership.
    - A letter on the customer's letterhead regarding contract/agreement is the CA.
    - An Operating Agreement and/or Power Service Agreement between developer and customer backs up that CA.

You can find this information online at the following web resource:

[PUC-Requirements](#)

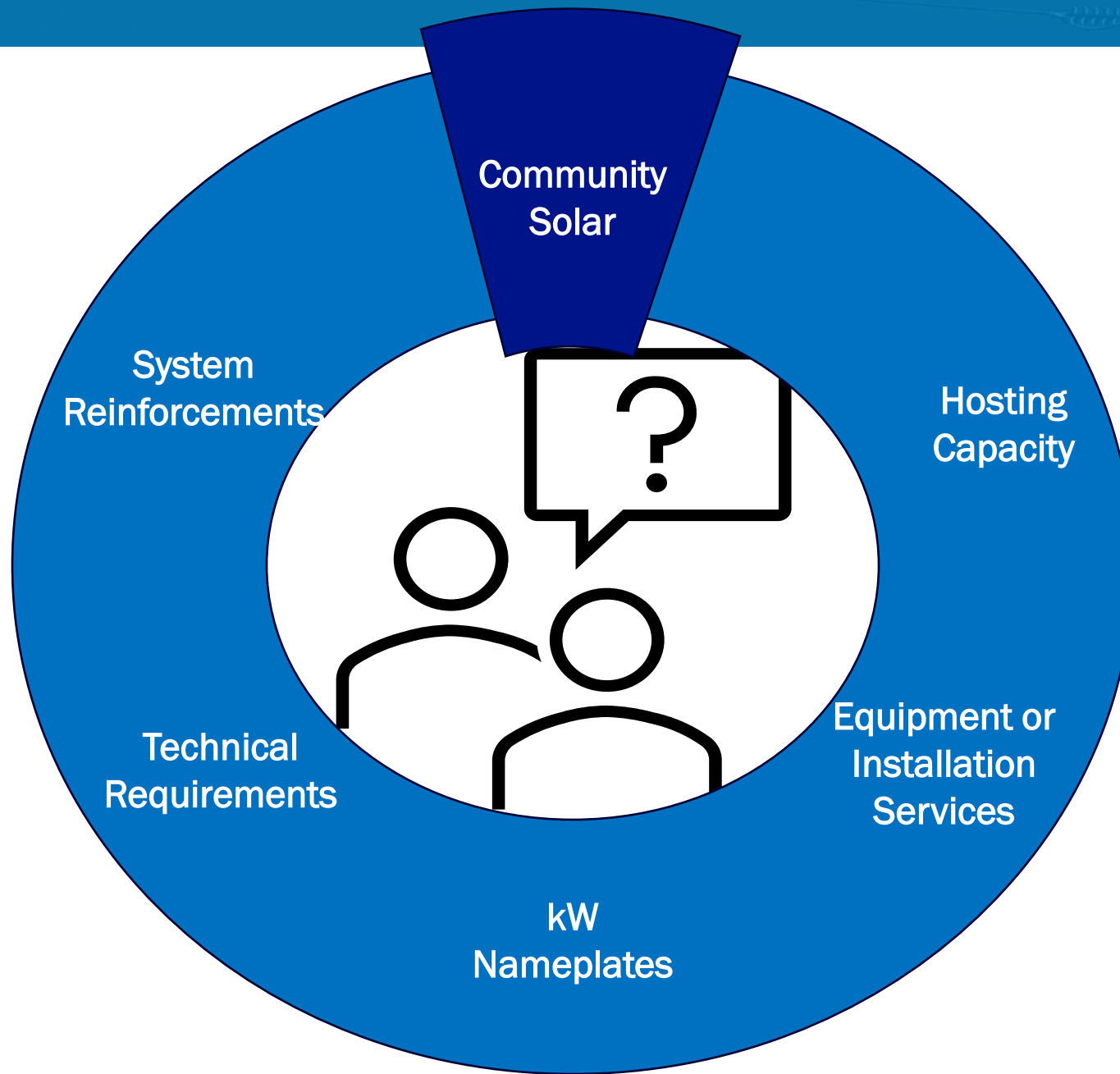


# Frequently Asked Questions



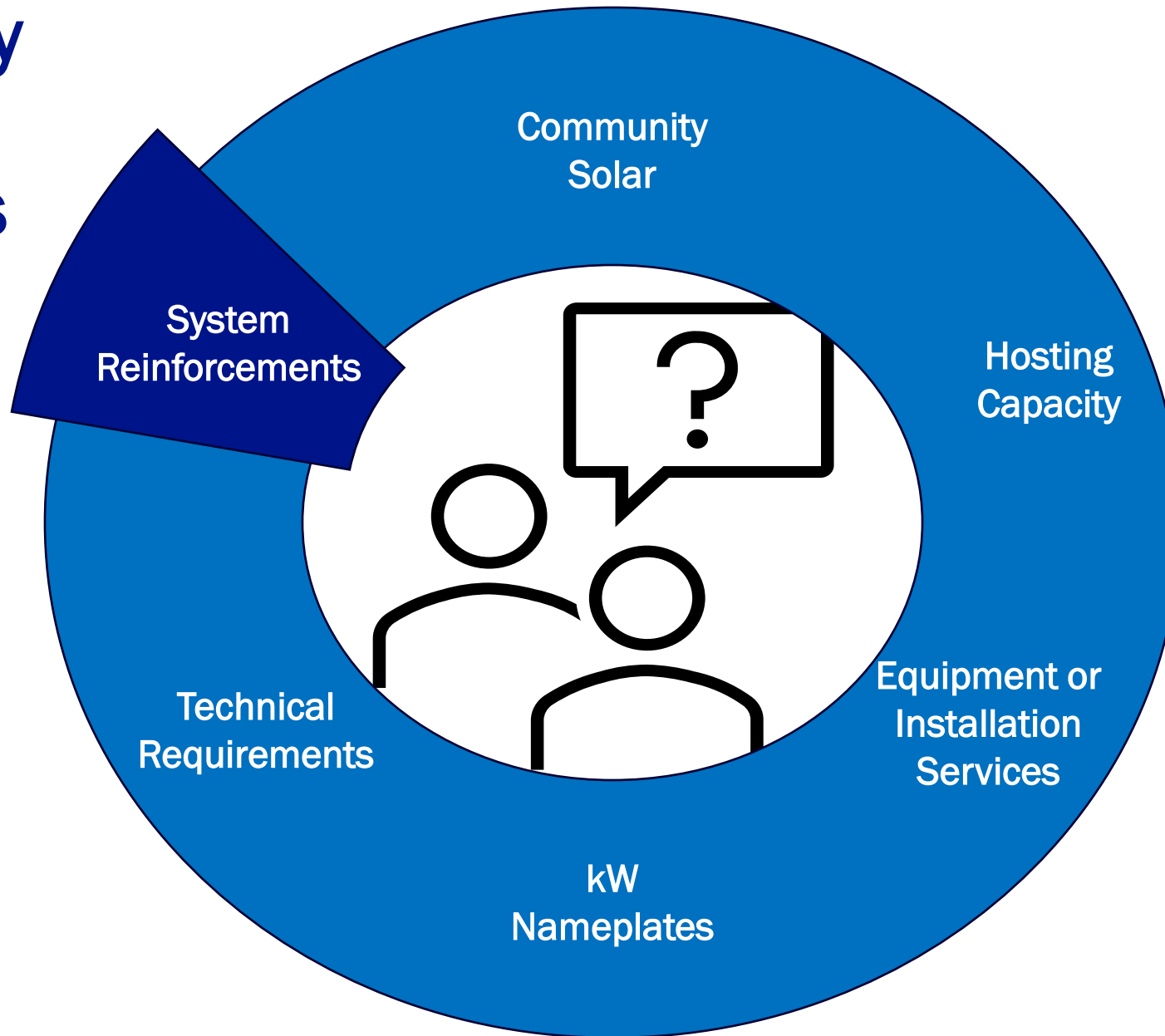
PPL Electric does not publish hosting capacity maps or provide hosting capacity information. However, use our pre-application process for your site-specific application.

# Frequently Asked Questions



State of Pennsylvania has not been approved to support or has authorized community solar programs or installations.

# Frequently Asked Questions

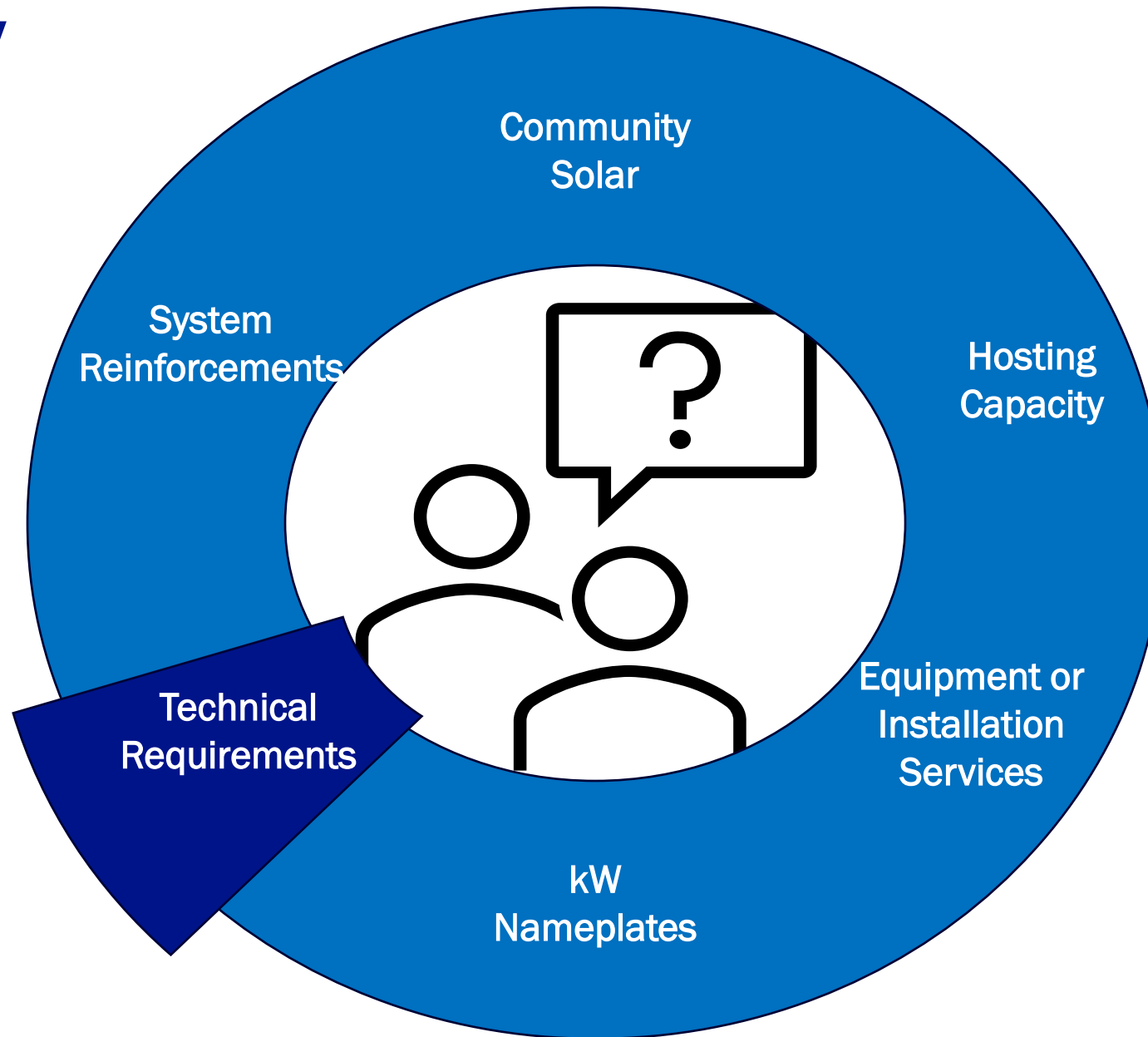


Examples of reinforcements which may be required by applicant:

- Transformer/Service upgrades.
- Installing protective devices.
- Line extensions or reconductoring.
- Customer installed relays and or SCADA.

**NOTE:** Applications that receive “conditional approval” may be subject to additional reinforcement charges.

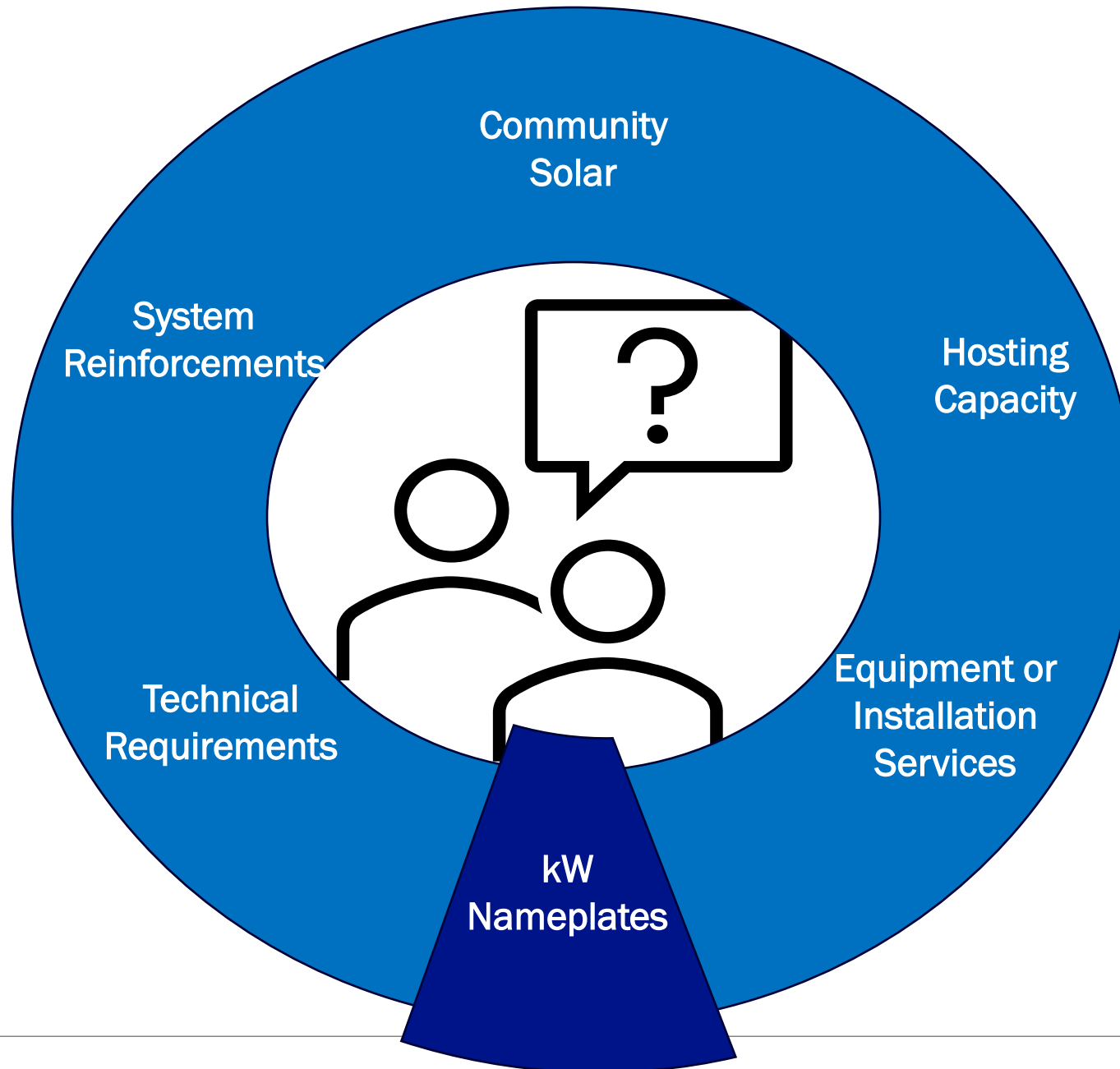
# Frequently Asked Questions



Visit our website for the following requirements:

- [Interconnection Technical Requirements](#) (Includes Energy Storage Policy)
- [Smart Inverters](#)
- [DER Management Pilot Program](#)

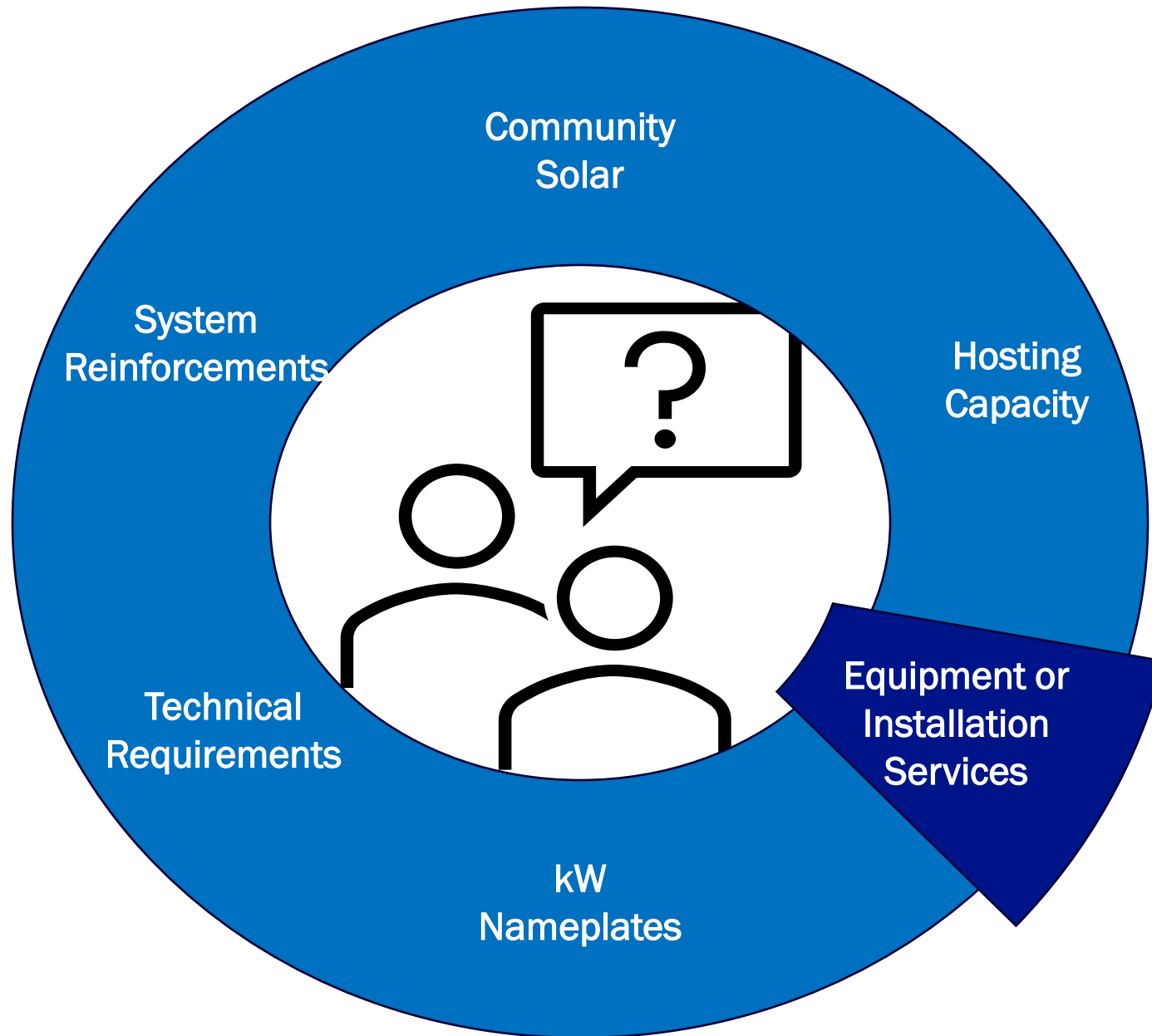
# Frequently Asked Questions



It is based on the net maximum or net instantaneous peak electric output capacity measured in AC (volt-amps) of the inverter.



# Frequently Asked Questions



PPL Electric does not provide generation equipment or installation services.

However, PPL Electric supplies:

- Bi-directional metering equipment.
- DER management equipment.

**Customer** is responsible for generation equipment, installation and, in certain circumstances, providing interval data to PPL Electric.

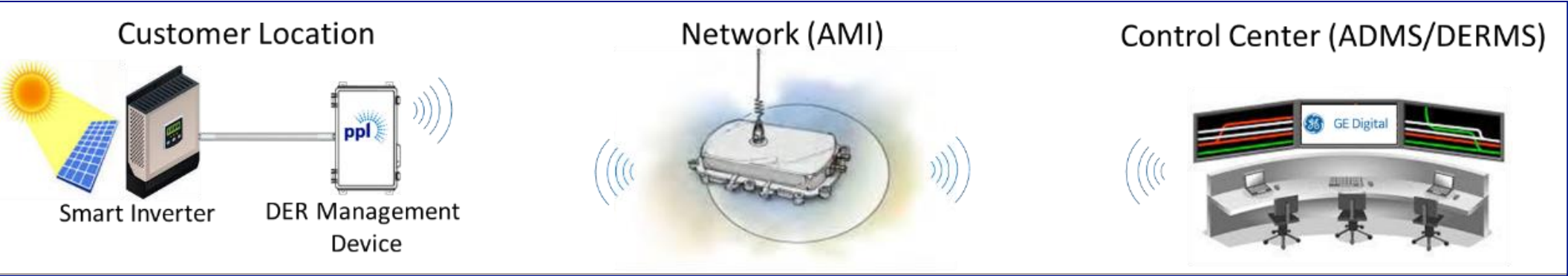
# DER Management Pilot Program

## Purpose:

- (1) the costs and benefits to distribution system operation and design of monitoring DERs through devices connected to inverters as compared to grandfathered systems with no visibility.
- (2) the costs and benefits to distribution system operation of active management of DERs as compared to the benefits available using inverter autonomous grid support functions.

## Value Proposition and Anticipated Benefits

Value Proposition	Anticipated Benefit
Power Quality	a. Improved Voltage
	b. Improved excursion ride-through
Reliability	c. System upgrades deferred / avoided
	d. Increased hosting capacity
	e. Improved Short-term forecasting
	f. Improved Long-term forecasting
Safety	g. Enhance operational flexibility
	h. Safer work environment



## Rules for Electric Meter & Service Installations (REMSI)

INFORMATION FOR CUSTOMERS AND CONTRACTORS



Stay safe!

[Call 811 at least 3 business days before any digging.](#)

[First Responder Safety](#)

[Worker Safety](#)



What's yours? What's ours?

[Overhead service \(English and Spanish\)](#)

[Underground service \(English and Spanish\)](#)



Building & Renovating  
[Work Order Process](#)  
& Timeline Chart



[Interconnections General Info](#)

[DER Management Pilot Resources](#)

[Net Metering and Virtual Net Metering](#)

PPL Electric has also developed a series of web resources through the [following links](#) below:

[REMSI-and-Announcements](#)

[One-Line Display-Standards](#)

[DER-Sketch-Tables](#)

### Table of Contents

Parts of this site contain .PDF files, to view these you will need to have [Adobe Acrobat Reader](#) installed.

1. [Introduction in Reference to Tariff](#)
2. [Notice - Theft of Service](#)
3. [Foreign Load](#)
4. [Applying for Electric Service](#)
  - [Single Phase Service](#)
  - [Three Phase Service](#)
  - [Residential Development/Apartment Complex](#)
5. [Map of PPL Service Area](#)
6. [Suggested Safe Practices](#)
7. [Definitions/Terms/Acronyms](#)
8. [List of Rules 1 through 34](#) (updated 06/20/2024)

### Announcements

#### Transformer loading

PPL Electric Utilities has set new thresholds on utility-owned secondary transformer sizing **for new applications** received on or after 8/23/2024. [Click here for more details.](#)

#### DER Customer Billing for Systems 250kW and Greater

Applications received on or after January 1, 2024, will be required to remit a non-refundable deposit of 25% of the estimated system upgrade costs



PPL Electric Utilities

# Additional Resources

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[Billing-and-Usage](#)

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[Customer-Owned-Generation](#)

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[Frequently-Asked-Questions](#)

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[List-of-Rules-REMSI](#)

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[Price Sheets](#)

---

[Price-To-Compare-and-Shopping](#)

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[Rule-28-REMSI](#)

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[Smart-Inverters-and-DER-Requirements](#)

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[Tariff-Rule-12](#)

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Thank you for  
attending!



PPL Electric Utilities