

Sponsor: McDuffa

RESOLUTION

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FLORENCE, ALABAMA, that the attached Valley Partner Flexibility Initiation Notice Form between the City of Florence and the Tennessee Valley Authority regarding the Mercury Solar Flexibility Project is hereby approved, ratified and confirmed.

BE IT FURTHER RESOLVED BY THE CITY COUNCIL OF THE CITY OF FLORENCE, ALABAMA, that the Mayor is hereby authorized to execute said form on behalf of the City of Florence.

ADOPTED this \_\_\_\_\_ day of \_\_\_\_\_, 2025.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
CITY COUNCIL

APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 2025.

\_\_\_\_\_  
MAYOR

ADOPTED & APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 2025.

\_\_\_\_\_  
CITY CLERK - TREASURER

# Valley Partner Flexibility Initiation Notice Form

Tennessee Valley Authority



Please complete this form and email to [Flexibility@TVA.gov](mailto:Flexibility@TVA.gov).

This form is considered complete when it provides all applicable and correct information required below. Additional information may be requested on a case by case basis.

TVA requests a single line diagram of the general area the generator will interconnect, which shows the proposed meter location.

## Valley Partner (Host Valley Partner, if applicable)

Company Name	LPC Number	Contact Person	
City of Florence	072	Mary McDuffa	
Address	City	State	Zip
110 W. College St.	Florence	AL	35630
Telephone	Email Address		
256-740-6044	mmcduffa@florencial.org		

## Valley Partner (Subscribed Valley Partner, if applicable)

Company Name	LPC Number	Contact Person	
Address	City	State	Zip
Telephone	Email Address		

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Tennessee Valley Authority



## Additional Contact (not required)

Name

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Address

City

State

Zip

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Telephone

Email Address

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## Generation Developer (if applicable)

Company Name

LPC Number

Contact Person

Toyota Tsusho America, Inc.	072	Carmine Farnan	
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Address

City

State

Zip

825 3 <sup>rd</sup> Ave 10 <sup>th</sup> floor	New York	New York	10022
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Telephone

Email Address

917-340-5556	Carmine_farnan@taiamerica.com
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## Flexibility Project Information

Flexibility Option Description (For Valley Partner Hosted, include how all financial and environmental benefits will be allocated, host fee, and if Host Partner will receive a capacity allocation)

Valley Partner Hosted  TVA Interconnected

Valley Partner Hosted Excess Option (select if you intend to sell back generation to TVA)

Type of Generating Facility or Program

Photovoltaic

Energy Source

Details if Solar

If Rotating Machine, Fuel Source

Solar

Gas

Rooftop

Fixed

CHIP

Natural Gas

Other:

Tracking

Other:

Other:

Owner(s) of the Generating Facility or Program (include % ownership of each organization if multiple owners)

Toyota Tsusho America – 100% ownership

Location (Point of Interconnection)

TVA Limestone Substation

GPS Coordinates of Point of Interconnection (POI)

GPS Coordinates of Generation Facility (if different from POI)

Lat 34.717772

Long -86.845773

Lat 34.674138

Long -86.852485

TVA Delivery Point of Generation is Normally Served From Alternate / Backup Feeds

TVA Limestone Substation

Station service load provided by Athens Utilities

Include Month and Year

Estimated Sync In-Service Date

Estimated Commercial Operation In-Service Date

Nov 2028

Mar 2029

## Existing Generation

Generation Type	Size	ISD	Primary Feed	Alternate/ Backup Feeds

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## Inverter Based Generation

Inverter Manufacturer		Model	
Sungrow		SG4400UD-MV	
Individual Inverter Nameplate Rating			
3,866 (kW)	4,400 (kVA)	645V (AC Volts)	
Total Number of Inverters		Total nameplate Size of the Plant (AC)	
29	110,000 (kW)	127,600 (kVA)	
Individual Solar Panel Rating		Total Number of Solar Panels	Size of Plant (DC)
610 (W)	234,427	143,000 (kW)	

## Rotating Machines

Machine Nameplate Rating		
(kW)	(kVA)	(AC Volts)

## Valley Partner Project Information

Plan to meter installed generation?	Type of Meter to be Installed
Yes	Utility Grade Revenue Meter
Protection Equipment Installed for Generator Interconnection	
Consistent with TVA Transmission Standards and Interconnection Agreement Requirements	

## Complete the following for Projects > 5MVA

### Transformer Data (if applicable, for interconnection customer-owned transformer)

Transformer Type	Size	Winding Configuration	Voltage
<input type="checkbox"/> Single-phase <input checked="" type="checkbox"/> 3-phase	75/100/125 (kVA)	High: Wye-Gnd Low: Wye-Gnd Tertiary: Delta	High: 161 Low: 34.5 Tertiary: 13.8

Transformer Impedance	
%: 9	kVA Base: 75

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## Inverter Based Generation

List Smart Inverter Functions Enabled at this Site (e.g., ride through, voltage control, etc.)

Multiple Settings are available - LVRT, HVRT, LFRT, HFRT, voltage control, power factor control, constant VAR, etc. Final settings will be reviewed with and approved by Transmission Provider

Are the inverters certified to UL 1741 SA?

Yes    No

Version of IEEE-1547 default inverter settings applied

1547-2003   
  1547-2014A (default)   
  1547-2014A (CA Rule 21)  
 1547-2018   
  Other:

## Generating Facility Characteristic Data (Rotating Machines)

*NOTE: Please contact TVA prior to submitting the form to determine if the specified information below is required. Add contact information.*

RPM frequency (\*) Neutral grounding resistor (if applicable)

## Synchronous Generators

Direct Axis Synchronous Reactance,  $X_d$       Direct Axis Transient Reactance,  $X'd$       Direct Axis Sub-Transient Reactance,  $X''d$ :

P.U.	P.U.	P.U.
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Negative Sequence Reactance,  $X_2$       Zero Sequence Reactance,  $X_0$       KVA Base      Field Volts      Field Ampere

P.U.	P.U.			
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## Induction Generators

Motoring Power (kW)		I22t or K (heating time constant)	
<input type="text"/>		<input type="text"/>	
Rotor Resistance, R <sub>r</sub>		Stator Resistance, R <sub>s</sub>	
<input type="text"/>		<input type="text"/>	
Magnetizing Reactance, X <sub>m</sub>	Short circuit Reactance, X <sub>d''</sub>	Stator Reactance, X	Rotor Reactance, X <sub>r</sub>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Exciting Current	Temperature Rise	Frame Size	Design Letter
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Reactive power required in VARs		Total Rotating Inertia, H	
No Load:	Full Load:	Per Unit on kVA base	
<input type="text"/>	<input type="text"/>	<input type="text"/>	

## Excitation and Governor System Data (Synchronous Generators Only)

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the Southeastern Electric Reliability Council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

I certify that all of the information contained in this form is accurate and true to the best of my knowledge and complies with the parameters set forth in the Valley Partner Expanded Flexibility End Use Customer Hosted Guidelines.



Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

## TVA Approval - Renewable Programs Manager (TVA Use Only)

Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_