Rule 21 Step Modification Document
DRAFT input from Southern California Edison

Modification #1: Fast Track Eligibility Bypass

Level: Crawl

Policy Question: Should non-export projects be eligible for review under Rule 21's Detailed Study processes? For Non-Export Project – Who pays for upgrades and who pays for system impact study costs?

- **Under the current Rule 21 Fast Track process, non-export parties will always pass Screen I and thus pass Fast Track, because Rule 21 concludes that "[i]f it can be assured that the Generating Facility will not export power, Distribution Provider's Distribution or Transmission System does not need to be studied for load-carrying capability or Generating Facility power flow effects on Distribution Provider voltage regulators."**
    - **While this conclusion concerning power flow was appropriate in the past, it is no longer appropriate if we apply ICA as part of the Fast Track review process. Use of ICA as part of the Fast Track review increases penetration levels of DERs and also reduces margin of available generation capacity. The increase in penetration and reduction in margin means that non-export Generating Facilities could, in fact, have a material impact on power flow effects.[1] Accordingly, SCE proposes that they should no longer be exempt from additional Fast Track screens that determine whether further study is required to determine whether any system upgrades (particularly power flow related upgrades such as thermal and voltage) are required. Non-export projects that impact the system should be responsible for the upgrades required to address those impacts.**

Implementation Dependencies: (1) Resolve question regarding appropriate study processes for non-export; (2) Development of Interconnection application tool able to leverage ICA values as part of the initial review process to determine fast track eligibility.

Step #	Step Name		Who	Data	Execution
Application Intake	Generating Facility Gross Nameplate Rating ≤30KW. Replaces: Non-Export/NEM-1 or Export/NEM2		IOU Intake	DER Gross Nameplate Information	If DER aggregate gross KVA nameplate capacity is 30KVA or less, then proceed to fast track evaluation If DER aggregate gross KVA nameplate capacity is greater than 30KVA proceed to evaluate for fast track eligibility

[1] SCE notes that increasing penetration levels, regardless of ICA, means that non-export generation could have an impact on power flow.

Application Intake	Generating Facility Gross Nameplate Rating ≤30KW		IOU Intake	DER Gross Nameplate Information	If project Nameplate is ≤ 30KVA it qualifies for Fast Track
Application Intake	Generating Facility Gross Nameplate Rating ≤30KW		IOU Intake	DER Gross Nameplate Information	If project Nameplate is > 30KVA then evaluate if qualifies for Fast Track

Statement of Benefits

This proposal allows all large DER's to be evaluated in terms of impact to the distribution grid in order to insure DER is connect to the grid in a safe reliable manner. -

1. **Steps to be skipped:** Modifies the steps of assessing if the generator is eligible for fast track based on facility type and thresholds.
2. **Steps to be sped up**: None.

Conclusion

Given the continued growth in DER installations, continuing to allow non-export project and large NEM projects to bypass the study evaluation process may cause significant safety reliability issues and may create costs allocation issues. While historically, this has not been an issue due to low levels of penetration, the continue increase will create this situation and thus should be addressed the assumption that non-export or large impacts have no impact to the system is no longer a adequate assumption to use and should be corrected.

Modification #2: Fast Track Eligibility

Level: Crawl/Walk

Policy Process Questions: What happens when upon validation the ICA value is different than what the customer used to request interconnection?

- **Is the Interconnection Customer given the opportunity to modify request? SCE proposes that at the customer choice, customer can submit a material modification request and such material modification should be as evaluated as currently in the rule.**

- **What if allowing the modification impacts Interconnection Customers? SCE proposes that this change would not be allowed and customers have the choice of processing the application in accordance to the validated information or withdrawn and resubmit a new applications- Per material modification approved process**

- **Does the queue position change if the Interconnection Customer decides to change the request? SCE proposes that this would follow the material modification approved process**

- **Are there additional application costs due to the new review? SCE proposes that this would follow the material modification approved process**

- **How long does the Interconnection Customer have to decide (the longer, the greatest the problem). SCE proposes that this would follow the material modification approved process**

Implementation Dependencies: (1) Resolve policy questions (2) Development of Interconnection application tool and processes able to leverage ICA values

Step #	Step Name	Who	Data	Execution
Application Intake	Fast Track Eligibility MW limit Adds an "Or" to the fixed 3 MW eligibility limit.	IOU Intake	Minimum 576 ICA value for ICAWNOF	If DER aggregate gross KVA nameplate capacity is ≤ the validated minimum ICAWNOF or ≤3 MVA gross nameplate rating , then it is eligible to be evaluated under the fast track process If DER aggregate gross KVA nameplate capacity is greater than the validated minimum ICAWNOF >3MVA, then project is to be evaluated under the detailed study process procedures
Application Intake	Fast Track Eligibility MW limit	IOU Intake	Minimum 576 ICA value for ICAWNOF	If DER aggregate gross KVA nameplate capacity is ≤ the validated minimum ICAWNOF or ≤3 MVA gross nameplate rating , then it is eligible to be evaluated under the fast track process
Application Intake	Fast Track Eligibility MW limit	IOU Intake	Minimum 576 ICA value for ICAWNOF	If DER aggregate gross KVA nameplate capacity is greater than the validated minimum ICAWNOF >3MVA, then project is to be evaluated under the detailed study process procedures

Statement of Benefits

Allows larger interconnection requests to take advantage of the calculated ICA values at the requested point of interconnection if ICA values at the requested POI are greater than 3MW. This also allows smaller projects ≤ 3MVA to continue to be processed under the fast track or supplemental review process.

1. **Steps to be skipped:** Adds ICAWNOF limit to the fast track eligibility limit. Maintains the existing 3MW static value (ICAWNOF or 3MW)

2. **Steps to be sped up**: Projects which would otherwise require detailed study may not be studied under the fast track process

Conclusion
DER project up to validated minimum ICAWNOF can allow for both a time and cost savings created by the greater use of the Fast Track review processes.

Modification #3: Screen M Modifications

Level: Crawl/Walk

Policy/procedural question:

1. **How will the installations be verified? If customer submits application with given parameters (angle, azimuth, losses, etc.) is it simply at the customers' attestation? What are the implication if correct installation parameters used?**
   SCE proposes that we need a third party certifying that the parameters in the application are accurate (specially for larger installation >30KW)

2. **Given that we would be using a third party set of data (PV watts) which is not under the control of PUC, IOUs or inverter industry, how can IOUs verify that the data is being maintained? Who should be responsible for the production data?**
   SCE proposes that the customer to submit the application also submits the production information and be accountable for the information. SCE will verify with PVWatts as part of the interconnection process but nevertheless the customer is responsible to making sure the DER project performs as provided in the application.

3. **How will a Generating Facility be held responsible if their Generating Facility does not perform consistent with the data (such as: DER produced more than calculated which caused over voltage conditions and equipment failure or injuries)? How can we establish sufficient safeguards to seek to eliminate this risk?** ***SCE proposes that the customer to submit the application be responsible for all issues caused by the overproduction and that customer be responsible for modifying the system to meet original requirements (remove panels, changes inverter settings, etc.)***

4. **What performance information should the customer provide to verify their operational profile?**

   SCE proposes that any DER >30KW (which do not have telemetry) and which use performance information to interconnect provide quarterly performance data to demonstrate compliance with DER output.

Implementation Dependencies: Need an interconnection tool which is capable of connecting to PV-watts to verify/generate the profiles in order to complete the technical evaluation

Step #		Step Name	Who	Data	Execution
M (Gross Nameplate)		If Gross Nameplate ≤ ICAWOF (CRAWL)	IOU Engineering	Minimum 576 ICA value for ICAWOF	If DER aggregate gross KVA nameplate rating is ≤ the validated minimum ICAWOF, then it is passes Fast Track
M(Fixed PV Output)		If Fixed PV production ≤ ICAWOF-FPVP (WALK)	IOU Engineering	Fixed PV Production Profile	If FPVP production output value is ≤ the validated ICAWOF for the specified fixed PV profile, than it passes fast track
M(Fixed PV Output).1			Customer/IOU Engineering	Fixed PV profile	Use yet to developed tools to determine if profile is with ICAWOF
M(Fixed PV Output).2			Customer	Fixed PV system specifications	Use yet to developed tools to extrac data from PV watts for comparison/verification purposes
M(Fixed PV Nameplate).1		Obtain technical nameplate information from customer	IOU Engineering	Obtain Protection ICA value	If DER aggregate gross KVA PV nameplate rating is ≤ the validated protection ICA value, then it passes fast track If DER aggregate gross KVA PV nameplate rating is > the validated protection ICA, then project goes to SR for evaluation of reduction of reach impacts

Commented [RS1]: Currently evaluating. However, this would provide the same limitation (flat line) as what SCE originally proposed.

Commented [RS2]: Currently evaluating. However, this would provide the same limitation (flat line) as what SCE originally proposed.

*FPVP – Fixed PV Profile

Statement of Benefits

Replace existing "***Aggregate Generation ≤ 15% of line section peak load***" criteria with:

- The validated minimum ICAWOF for uniform generation,
- The validated minimum ICAWOF-FPVP for Fixed PV systems

When minimum ICA values for uniform and/or customer specified fixed PV profile has been validated as part of screen A3, projects to these levels would be approved under fast track.

Utilization of these values would allow Interconnection requests which would otherwise have to be evaluated under the supplemental review or detail study to be quickly evaluated under the fast track initial review process which also has the benefit for significant reduction of study cost. Additionally, customers can take advantage of the output profiles of fixed pv systems which is currently not available.

1. **Steps to be skipped:** Supplemental Review and/or detail study for projects which would otherwise had to be studied under those process

Steps to be sped up: Projects which would otherwise require detailed study or Supplemental review would now be processed under initial review timelines and costs

Conclusion

When an interconnection customer provides the appropriate level of information, it may possible to use the validated minimum ICAWOF-FPVP or the validated minimum t capacity expedite the interconnection process for larger KVA rated systems

Modification #4: Technology Type (New Screen A1)

Level: Walk

Step #	Step Name	Who	Data	Execution
A1	DER Short Circuit Contribution ≤ 1.2 p.u.	IOU Engineering	Interconnection Technical Application Information	If DER SCD P.U contribution ≤ 1.2 p.u. then it passes this screen and can continue to be evaluated under fast track If DER SCD P.U contribution > 1.2 p.u. then it fails this screen and may need to be evaluated under the supplemental review for impacts to reduction of reach

Statement of Benefits

Allows the ICA values to be used in the interconnection process for the correct technology type

1. **Steps to be skipped:** None - Added One Step
2. **Steps to be sped up**: None - Added One Step

Conclusion

It is necessary to include this screen (or requirement) as without this verification, the ICA values are meaningless as they would be used for technology which was not evaluated for ICA methodology

Modification #5: Evaluation of ICA value (New Screen A3[2])

Level: Walk

Dependencies: policy questions as outlined in #1

Step #	Step Name	Who	Data	Execution
A3	Evaluate if ICA is available and accurate	IOU Engineering	Network model information and recent updates	Verification that network model has been modified due to operations; verify that no new interconnections have been received since last update; verify that data, models are accurate and that the tool is producing accurate ICA results.

Statement of Benefits

Allows the ICA values to be used in the interconnection process while ensuring that the ICA values are updated and accurate and ensuring that the DER is interconnected to the distribution grid in a safe and reliable manner.

1. **Steps to be skipped:** None - Added One Step
2. **Steps to be sped up**: None - Added One Step
3. Removed
4. Removed

Conclusion

This new screen (or requirement) insures that correct and accurate ICA values are used in the interconnection process ensuring that DERs connect to the grid safely.

[2] A2 in previous diagrams was inserted in screen M.