12,000 MW Distributed Generation (DG)

Figure 1 Current programs, if fully subscribed, could achieve nearly 9,000 MW. After that, an annual growth rate of about 7.5% would be needed between 2016 and 2020 to achieve the 12,000 MW goal.

Figure 1: Renewable distributed generation (20 MW or less)


To see a graphic representation of Governor Brown's 8,000 MW of large-scale renewables and the California Clean Energy Future goal to add 1,000 MW of energy storage by 2020, please refer to the metric on Installed Capacity.

For more information on capacity installed to date and authorized capacity under current renewable distributed programs in California, see the metric on Renewable Energy.

The location of renewable distributed energy projects in California in 2009 is shown in Figure 2.
Figure 2: California distributed generation resources (20 MW or less)

As discussed in the *Renewable Power in California: Status and Issues* report, the interconnection process for projects 20 MW or smaller varies for each utility or transmission operator (California ISO). **Table 1** shows the different processes that projects must go through to interconnect to the grid in California. **Table 2** shows the expedited procedures for interconnecting small projects that are not expected to impact the grid and that can be verified by passing various screens.

**Table 1: State and Federal Interconnection Processes**

<table>
<thead>
<tr>
<th>Process</th>
<th>Project Size Limit</th>
<th>Jurisdiction</th>
<th>Grid</th>
<th>Status</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule 21</td>
<td>None</td>
<td>CPUC or Publicly Owned Utility</td>
<td>Distribution or Transmission</td>
<td>In use today; typically used with customer programs or qualifying facilities.</td>
<td>90 -180 Business Days</td>
</tr>
<tr>
<td>Wholesale Distribution Access Tariff (WDAT)</td>
<td>None</td>
<td>FERC</td>
<td>Distribution</td>
<td>In use today. PG&amp;E and SCE recently changed study process from serial process to cluster study process. FERC approved changes in May 2011.</td>
<td>+/- 330 Calendar Days</td>
</tr>
<tr>
<td>Small Generator Interconnection Procedure (SGIP)</td>
<td>20 MW</td>
<td>FERC</td>
<td>Transmission</td>
<td>No longer available. Reformed from serial to cluster study process in 2010.</td>
<td>n/a</td>
</tr>
<tr>
<td>Large Generator Interconnection Procedure (LGIP)</td>
<td>None</td>
<td>FERC</td>
<td>Transmission</td>
<td>No longer available, merged with SGIP into GIP. Reformed from serial to cluster study process in 2009.</td>
<td>n/a</td>
</tr>
<tr>
<td>Generator Interconnection Procedure (GIP)</td>
<td>None</td>
<td>FERC</td>
<td>Transmission</td>
<td>In use today. Combines SGIP and LGIP into one cluster study.</td>
<td>+/- 420 Calendar Days</td>
</tr>
</tbody>
</table>

**Note:** Rule 21 has not yet been used for interconnection to the transmission system.

**Source:** California Energy Commission based on Table Source [1]
Table 2: Expedited Interconnection Processes

<table>
<thead>
<tr>
<th>Interconnection Process</th>
<th>Expedited Review</th>
<th>Project Size Limit</th>
<th>Screens</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule 21</td>
<td>Initial Review, Simplified Interconnection</td>
<td>None</td>
<td>Must pass 8 Screens A</td>
<td>&lt; 1 month</td>
</tr>
<tr>
<td>WDAT</td>
<td>Fast Track</td>
<td>2 MW (SCE and SDG&amp;E)</td>
<td>Must pass 10 screens, which were derived from Rule 21 B</td>
<td>≈ 1 month</td>
</tr>
<tr>
<td>GIP</td>
<td>Fast Track</td>
<td>5 MW</td>
<td>Must pass 9 screens C</td>
<td>≈ 1 month</td>
</tr>
</tbody>
</table>

A See [http://www.energy.ca.gov/distgen/interconnection/application.html](http://www.energy.ca.gov/distgen/interconnection/application.html).
C The California ISO revised the Fast Track through the SGIP stakeholder process, raising the project limit from 2 MW to 5 MW and removing the 10th screen, which did not allow a project to proceed through the fast track if it triggered any grid connection upgrades.

Source: California Energy Commission based on Table Source [2]

Figure Sources:
The following data sources were used to prepare the figures in this metric:


[10] Southern California Edison Renewables Standard Contracts RFO

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Table Sources:
