Secondary Enclosed Unit (SEU)
The Secondary Enclosed Unit is designed for wind power generation. The SEU typically consists of routine-tested MV switchgear, a transformer and LV switchboard in an enclosure. Depending on turbine setup, only MV switchgear enclosure can be used. It is typically installed as close to the wind turbines as possible, to transform and protect the power from the turbine. The enclosure enables the SEU to be easily and rapidly connected to the grid, reduces wear, and simplifies maintenance.

Features
- Simple and quick installation – pre-test units at the factory, drop in place and connect cables
- Pre-engineered products to reduce time to quote and supply, while reducing risks
- Engineered for efficient cooling in order to extend the life of the equipment
- All ABB designs are green to support the environment
- No exposed live parts, more safe for operator and personnel
- SCADA ready
- All equipment contained in the SEU are type tested according to their relevant standards
- Robust and reliable – proven components from a single source
- Compact and easily transportable
- Optional oil collection pit for environmental protection
- Internal maintenance available
- Equipment protected from environment
- Economic solution
- All doors are lockable to prevent unauthorized entry

Transformer
The SEU is capable to accept either oil immersed or dry type transformers. The transformer characteristics are specifically designed to be fully compatible with the requirements of turbine. The transformer can be provided with alarm and trip contacts for temperature and gas pressure, and can be mounted separately externally, if no enclosure is required.

Medium voltage
The SEU can be provided with different options of Medium Voltage switchgear from ABB’s SF6 or air insulated switchgear portfolio. The MV switchgear can be provided with SF6 gas alarm, switch position contacts, plug-in MV surge arresters or auto reclosing functions.

Low voltage
Low voltage switchgear can be configured for different ratings and protection schema.

Housing
The housing is a product of ABB’s long experience in producing substations all over the world. The steel container is designed for outdoor installation, can be equipped with many safety features and allows walk-in maintenance during poor weather. The transformer and switchgear are enclosed in an optimized layout that provides sufficient air circulation.

Smart Grid
- Smart grid ready for easy connection to any SCADA system through any standard communication protocols
- Remote Terminal Unit (RTU) to monitor the SSU and store data for operation, maintenance and fault analysis
- Local and remote monitoring commands available
- Smart grid compatibility provides supervision and operation of substations from a central office by utilizing end user communication and infrastructure and ABB Station automation device
Pre-engineered solution technical data

Pre-designed solutions are available for optimized designs and quicker delivery. Power ratings are aligned with the most common inverter power ratings. The solutions are equipped with medium voltage switchgear SafeRing CCV configuration (cable loop with breaker and relay protection). The transformer includes standard integrated protection for pressure and gas. Product datasheets are available with an overview of other options available. Pre-designed solutions for Power Collection are shown below:

<table>
<thead>
<tr>
<th>Style number</th>
<th>SEU-S-1510-0CCV-4000</th>
<th>SEU-S-3010-0CCV-3000</th>
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<tbody>
<tr>
<td>Enclosure type</td>
<td>Steel enclosed</td>
<td>Steel enclosed</td>
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<tr>
<td>Overall parameters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length x Width x Height, mm</td>
<td>6100 x 2600 x 2440</td>
<td>6100 x 2600 x 2440</td>
</tr>
<tr>
<td>Approximate weight (metric tons)</td>
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<td>MV switchgear</td>
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<td>Switchgear type</td>
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<td>Protection Relay</td>
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<td>REJ603</td>
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<td>Transformer</td>
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<tr>
<td>MV Voltage level, kV max</td>
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<td>40.5</td>
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<tr>
<td>Standard protection</td>
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<td>RIS</td>
</tr>
</tbody>
</table>

Single line diagram/layout

For more information please contact:

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