

2013

19-21
November

Melbourne, Victoria

Register online at
[www.entura.com.au/
institute](http://www.entura.com.au/institute)

Large renewable system integration

The transmission of power from an energy generation project forms a key component of project viability and early planning can facilitate a clear understanding of risks and how they can be avoided or managed.

This course provides an overview of the key risks and issues that affect successful major system integration planning. Importantly, it covers the specific technical complexities and requirements for integrating renewables and how significant delays can be avoided.

The course draws on Entura's depth of experience based on our long history of involvement in the development, operation and maintenance of electricity networks in Australia and, in particular, the transmission planning for a host of renewable energy projects around Australia and internationally.

After completing the course, participants will have a good familiarity of the key risks and approaches for avoiding or mitigating those risks, saving time and money for their projects.

Course content

Introduction to large scale renewables

- Grid connected 50 MW plus
- Typical resource types and energy recovery methods
 - Solar
 - Wind
 - Mini/micro Hydro
- Drivers for renewable energy development

General principles of grid connection

- Dealing with grid codes
- Interfacing with other network users/ network service providers
- Interfacing with manufacturers

Key risks and their relationships

- Route selection
- Voltage
- Reliability and variability
- System losses/efficiency
- Portfolio effects, loss of production

Mitigation and control

- Control systems to allow for variability of output
- Optimisation of transmission/controls against resource utilisation
- Support requirements to firm up variable output from renewables

Participant profile

- Junior engineers
- Energy project developers
- Managers with project or general oversight responsibilities

Learning objectives

To provide participants with an understanding of:

- key risks and issues associated with planning for major system integration
- ways to manage for the specific requirements for renewables and how to avoid delays.

Learning methods

- Lectures
- Case studies and scenarios
- Discussions
- Site visit to a wind farm

Course providers

Entura's lecturers include:

- accredited training professionals
- technical specialists and professionals with extensive experience and qualifications across a broad range of disciplines.

Customisation

This course can be customised to suit specific regional, program, or project needs and/or can be combined with other technology specific courses on project development.



Course Director

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