



Large Scale Solar Energy

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Energy Policy Objectives

The Victorian Government has the following energy policy objectives:

Ensure an efficient and secure energy system;

Ensure those supplies are delivered reliably and safely;

Ensure consumers can access energy at affordable prices; and

Ensure our energy supplies and the way we use them are environmentally sustainable.

Developing the Right Energy Mix

To meet these objectives requires a suite of energy technologies which must be:

dispatchable – the technology should allow for output which can match demand in the NEM;

abundant – the technology should employ a resource which is widely available throughout Australia;

secure – the technology should employ a resource which is not subject to sudden supply disruptions due to natural or international market forces;

environmentally sustainable – the technology should not impose undesired impacts on local environments including biodiversity, surface water or groundwater;

socially acceptable – the technology should not impose unacceptable impacts on local communities including visual intrusion, noise, odour, vibration, and competition for common resources; and

broader economic benefits – the technology should lead to significant, long-term benefits to the Australian economy (employment, skills development, components supply, regional development etc).

Victorian Large Scale Solar Electricity Generation Initiative - 1

The Government will provide up to \$100 million NPV in the form of a grant, based on competitive proposals

- The project must:
 - Be located in Victoria
 - Demonstrate equal or greater financial support from each of the Australian Government and the private sector; and;
 - Generate a targeted minimum of 330GWh per annum of electricity from solar energy for a period of at least 20 years.

Victorian Large Scale Solar Electricity Generation Initiative - 2

- The Government does not intend to:
 - recover funds extended to the project;
 - acquire equity in the electricity generator resulting from the project;
 - acquire ownership of any intellectual property associated with the project;
 - demand surrender of RECs associated with the generation asset(s) once operational; or
 - enter into a Power Purchase Agreement (PPA) with the project owners

Victorian Large Scale Solar Electricity Generation Initiative - 3

The form and nature of the project (ownership structure, technologies, physical location) is open to negotiation

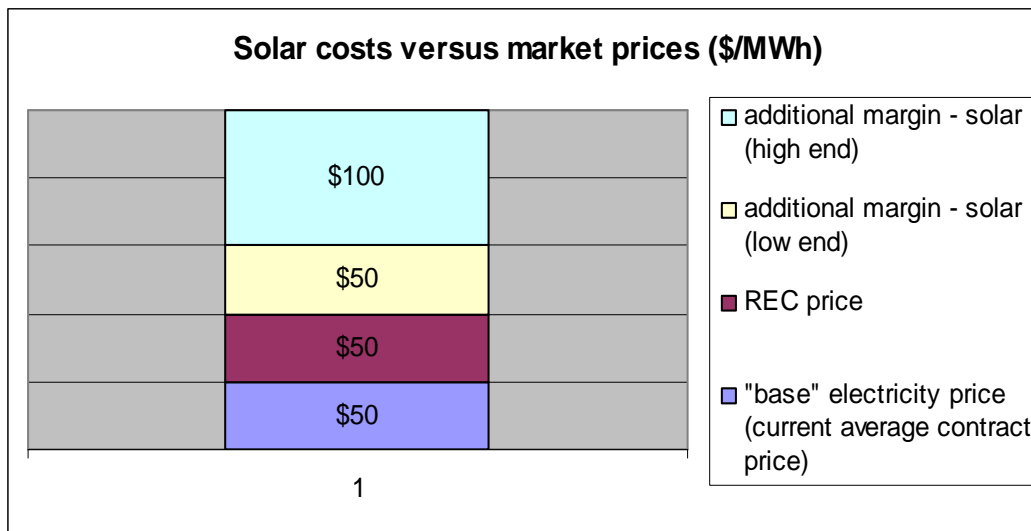
Form and nature of disbursements is also negotiable:

- all up-front
- disbursed in instalments over time
- Project proponents will be expected to indicate a preference, and to explain why this is to the benefit of all parties

Why \$100 million?

RECs + base electricity expected to provide Australian renewable energy generators income of approx. \$100/MWh...

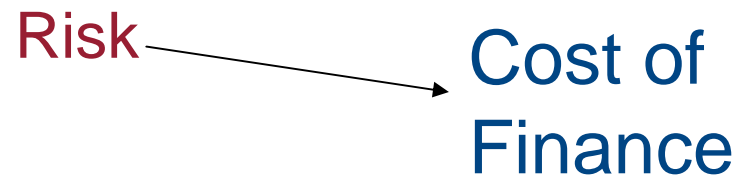
... but electricity from existing solar technologies costs between \$150-\$250 to produce



If the costs of closing this funding gap are borne equally by Commonwealth and State Governments, Victoria will need to contribute approx. \$100 million

The expectation is that a competitive process yields the lowest possible cost

Cost of Finance Issues when 80 to 90% of lifetime cost is upfront capital cost



Cost of Finance Issues when 80 to 90% of lifetime cost is upfront capital cost

Technical

Risk

Cost of Finance

Will it work

Can it be built (local EPC experience)

What if the environment changes (cloudy year/calm year)

How long will it work for

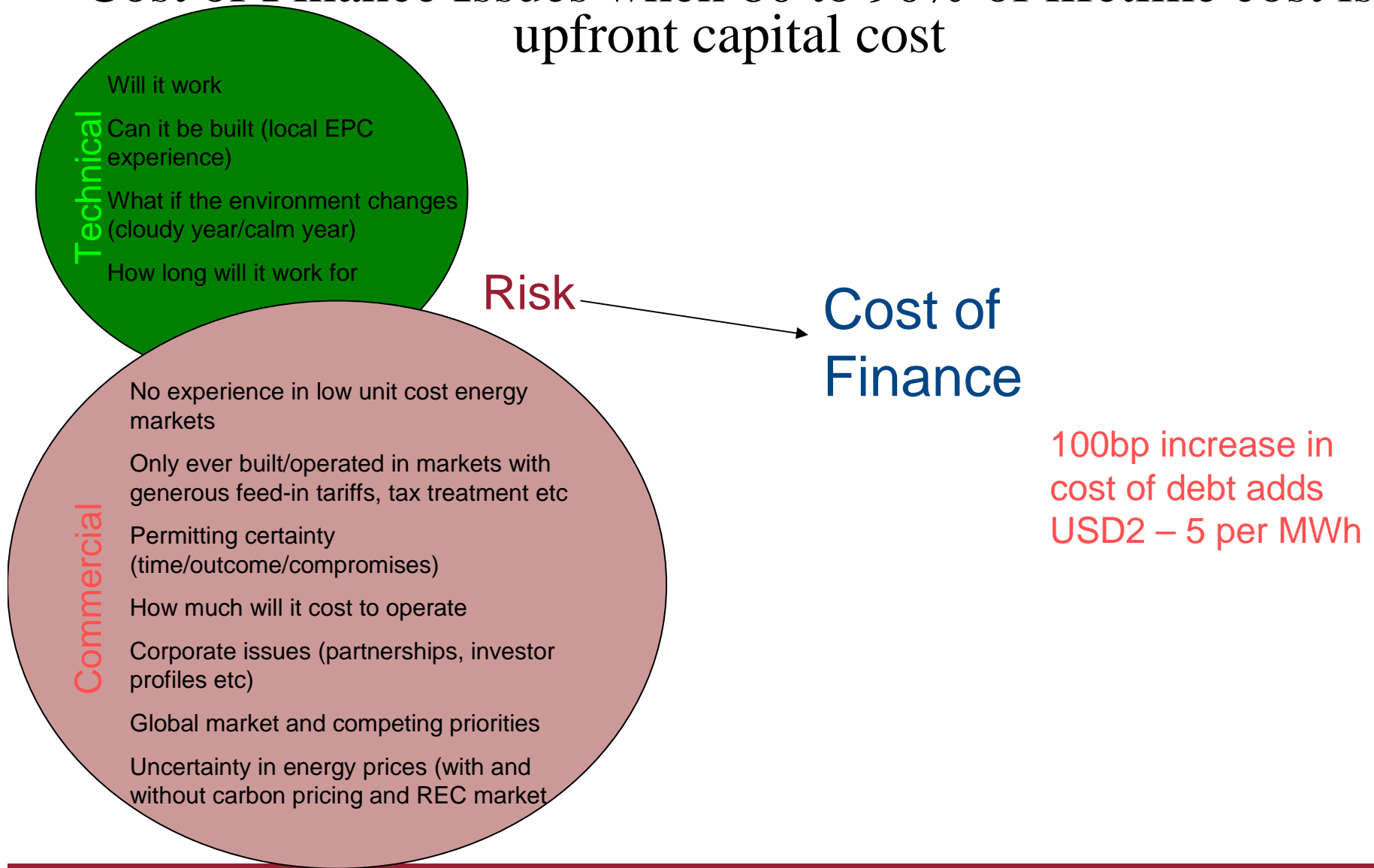
Cost of Finance Issues when 80 to 90% of lifetime cost is upfront capital cost

Technical

Commercial

- No experience in low unit cost energy markets
- Only ever built/operated in markets with generous feed-in tariffs, tax treatment etc
- Permitting certainty (time/outcome/compromises)
- How much will it cost to operate
- Corporate issues (partnerships, investor profiles etc)
- Global market and competing priorities
- Uncertainty in energy prices (with and without carbon pricing and REC market)

Cost of Finance Issues when 80 to 90% of lifetime cost is upfront capital cost



Solar Flagships

Factsheet 28 October

- Up to 1000MW
- Up to 4 projects
- 1 Solar thermal + 1 PV in first round up to 400MW
- 2nd round technologies TBC
- Objectives include solar industry & regional development
- Include research infrastructure
- Develop Australian IP
- “Commercially proven” >30MW for 12 months or replicable smaller units
- Solar thermal at single site
- PV up to 5 sites, min 30MW
- Gas co-firing up to 15% of output
- Storage optional but favoured
- Possible two stage process
- Assessed by “Solar Flagships Council”

Victorian Large Scale Solar

RFP and submission to BCG

- At least 330GWh/annum
- Single project but could be at multiple >30MW sites
- Technology neutral
- Demonstrated as commercially viable
- Gas co-firing allowed (funding only for solar component of project)
- Assessed by commercial and technical panels selected via tender

- Pipeline of 8 – 10 projects of 100 – 150MW
- Technology neutral throughout
- Hybrid technologies supported – driven by commercial and technical reasons
- No mandatory R&D
- Storage encouraged but not mandatory

Further information

Large Scale Solar website:

www.dpi.vic.gov.au/largescalesolar

- Process updates
- Documentation
- Collaborations