Annexure 6

NSW GOVERNMENT

# LARGE-SCALE SOLAR ENERGY GUIDELINE

*For State Significant Development*

*December 2018*

**December 2018**

# Contents

# 1. Introduction

**This guideline provides the community, industry, applicants and regulators with general guidance on the planning framework for the assessment and determination of State significant large-scale solar energy projects under the *Environmental Planning and Assessment Act 1979* (EP&A Act).**

**The solar energy industry is rapidly evolving, with a high potential for innovation and significant technological advances in the future. The Department will review and update this guideline from time to time, to ensure it reflects any shifts in knowledge and technology as the industry develops further.**

## 1.1 Objectives

The objectives of this guideline are to:

- provide guidance to the community, applicants, industry and regulators on how the Department of Planning and Environment (the Department) assesses environmental, social and economic impacts of State significant solar energy projects
- encourage industry to select suitable sites for projects to reduce the likelihood and extent of land use conflicts and environmental and social impacts
- facilitate better on-ground outcomes by promoting early identification of potential impacts
- promote meaningful, respectful and effective community and stakeholder engagement
- support the development of a sustainable solar industry in NSW by providing a clear, consistent and responsive policy framework.

## 1.2 Application of the Guideline

This guideline has been prepared for applications for development consent for solar energy projects that are State significant development. It also applies to applications to modify an approved State significant solar energy project. The Department also encourages applicants to read this guideline early in their project planning to inform site selection and the environmental impact assessment process.

A solar energy project includes works, infrastructure and buildings for the purpose of the generation of electricity by solar power.
This guideline is primarily aimed at the development of large-scale, ground-mounted photovoltaic solar energy projects. Solar energy projects that use other technologies (e.g. concentrated solar thermal, lens concentrators, floating solar, and hybrid systems that combine solar with other energy generating sources) are likely to have different site selection and impact assessment issues.

Although State significant solar energy projects are the focus of this guideline, applicants, Councils and planning panels that are responsible for local and regional solar development applications are encouraged to consider the site selection and impact assessment matters in the guideline when determining local and regional solar development applications.

## *1.3 Strategic context*

Australia has the highest average solar radiation per square metre of any continent in the world. NSW has an abundance of excellent solar resources and established electricity infrastructure that, along with declining technology costs, makes it an attractive location for solar energy development.

The NSW Government supports the development of a sustainable solar energy industry in NSW and acknowledges it would help to reduce reliance on fossil fuels, thereby contributing to reductions in air pollution and greenhouse gas emissions.

Large-scale solar energy projects can also support jobs and investment in regional NSW and offer the potential for significant economic benefits in regional communities that may not have similar opportunities from other industries.

In the strategic context, large-scale solar energy projects provide an opportunity to:

- contribute to NSW achieving net-zero emissions by 2050 as set out in the NSW Climate Change Policy Framework
- deliver on commitments in the NSW Renewable Energy Action Plan
- support Australia's commitments to reduce greenhouse gas emissions
- contribute to any Commonwealth renewable energy targets
- assist in meeting energy demand and improving energy security for NSW.

This guideline aims to ensure that:

- impacts are assessed with best practice methods and in a consistent manner
- effective stakeholder engagement is undertaken that encourages community input on solar energy development
- there is a balance between attracting investment and considering the interests of the community.

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# 2. Planning framework

**The EP&A Act sets out the environmental planning and assessment system for development in NSW. This provides for identifying which solar energy projects are to be assessed and determined under the State significant development approval pathway.**

## 2.1 When is a solar energy project 'State significant development'?

Under the EP&A Act and the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP), a solar energy project is State significant development if it is not permissible without consent and:

- has a capital investment value of more than $30 million; or
- has a capital investment value of more than $10 million and is in an environmentally sensitive area of State significance.

Alternatively, under the EP&A Act, the Minister for Planning may, by way of an order, declare a specified development on specified land as State significant development. However, the Minister must first obtain and make publicly available advice from the Independent Planning Commission on the State or regional planning significance of the development.

The Independent Planning Commission is the consent authority for State significant development in the following circumstances:

- 25 or more people have objected to the application
- the local council has objected to the application; and/or
- the applicant has disclosed a reportable political donation.

Where those circumstances are not present, the Minister for Planning is the consent authority (and a delegate may exercise the Minister's consent authority functions).

## 2.2 Where are large-scale solar energy projects allowed?

Permissibility of solar energy development is determined by the EP&A Act and relevant environmental planning instruments, including State Environmental Planning Policies (SEPPs) and local environmental plans (LEPs). Key reference points include:

- the zoning and land use provisions of the relevant LEP
- Part 3, Division 4 of State Environmental Planning Policy (Infrastructure) 2007
- Part 4, and Schedule 1, clause 20 of the SRD SEPP.

Where solar energy development is permitted with consent, the applicant can lodge a development application for determination by the relevant consent authority. If the applicant is not the owner of the land to which the development application relates (or is not the only owner), the applicant must provide evidence that all the relevant landowners consent to the application.[1] If access to Crown Land is required, the proponent should contact Crown Lands, NSW Department of Industry.[2]

[1] *Environmental Planning and Assessment Regulation 2000, clause 49(1)(b).*

[2] *See www.industry.nsw.gov.au/lands.*

## 2.3 What other approvals may be needed?

This section outlines some of the other approvals that may be required, in addition to development consent. If in doubt as to what approvals are required, applicants should consult the relevant government agency for further information.

**Commonwealth approval**

Under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act), an approval from the Commonwealth Government may be required if a development is likely to have a significant impact on matters of national environmental significance or other protected matters. This includes (but is not limited to) listed threatened species and ecological communities.

Applicants are encouraged to discuss their project with the Department early in the assessment process to understand if approval under the EPBC Act is likely to be required and whether there is a bi-lateral agreement in place between the NSW and Commonwealth Governments to streamline the EPBC Act assessment. An applicant must refer their project to the Commonwealth Department of Environment and Energy if it is likely to have a significant impact on matters of national environmental significance. The *EPBC Act Significant Impact Guidelines* (Commonwealth) provide guidance on whether or not an impact is likely to be significant.[3]

**Subdivision of land**

Some sites may require the subdivision of land to support the proposed development. For example, subdivisions may be required for substations within a project site, or for land that will be leased for longer than five years.[4]

Local councils are generally the relevant consent authorities for subdivisions and applicants should discuss subdivision options with the relevant council and the Department. Based on this consultation, applicants may wish to include the subdivision in the scope of their State significant development application.

**Planning approval for network connections**

Planning approval is likely to be required for the infrastructure works necessary to connect a solar energy development to the electricity network. Applicants are encouraged to consult with the relevant transmission or distribution network service provider early in the project planning process to identify the scope of works required to enable connection, and to determine the planning assessment pathway for those works. The works may include network connections and associated infrastructure such as substations and access roads.

The following planning assessment pathways may be available for such works:

- ***State significant development:*** applies if the applicant includes the network connection works in the development application for the State significant solar energy project. This approach may help streamline stakeholder engagement on the project and ensure all aspects of the development are covered by the development consent.
- ***Development without consent:*** applies if development for the purpose of an electricity transmission or distribution network is permissible without consent in the circumstances. Development that is permissible without consent may still require an assessment to be carried out under Part 5 of the EP&A Act. If the relevant works are permissible without consent, the environmental impact statement for the State significant solar energy project should still provide details of such development but clearly state that consent is not being sought for it.

*[3] These guidelines are available here: http://www.environment.gov.au/epbc/what-is-protected*

*[4] Conveyancing Act 1919 (NSW), section 7A.*

*[5] For this to be the case, the development must be carried out by or on behalf of a public authority or an electricity supply authority and the criteria in the State Environmental Planning Policy (Infrastructure) 2007 must be met. Notification requirements may also apply.*

# 3. Stakeholder engagement

**Applicants are encouraged to engage with relevant stakeholders at all stages of the environmental impact assessment of State significant solar energy development, from scoping through to post-approval. Project specific "Secretary's Environmental Assessment Requirements (SEARs) and consent conditions may also include consultation requirements that must be complied with.**

### Scoping meeting with the Department

During scoping and before commencing the formal development assessment process, applicants should contact the Department and arrange a meeting to discuss the proposed project. The Department will provide preliminary feedback about site selection and potential constraints.

### Stakeholder Engagement

The Department also encourages applicants to consult with a wide range of stakeholders, including:

- ***Government*** – relevant agencies at the local, State and Commonwealth levels, including:
  - *Local council* - to identify local or strategic issues such as the council's planning strategies, zoning, potential land use conflicts, road access and waste management, which may inform site selection and project design. Council may also identify other local community concerns and suggest key local interest groups to consult with.
  - *NSW Government agencies* – to identify regional planning strategies, understand constraints, any potential impacts and other approvals required, inform project design and develop mitigation measures. This may include Roads and Maritime Services, Office of Environment and Heritage, the Department of Industry, the Rural Fire Service and Fire & Rescue NSW.
  - *Commonwealth Government* – if there are likely to be any significant impacts on matters of national environmental significance or other protected matters under the EPBC Act.
- ***Community*** – affected landowners, special interest groups and other stakeholders, including:
  - *Local land owners* – both of the project site (if not owned by the applicant) and those whose land is required for access during construction and maintenance.
  - *Special interest groups* – including local community groups and relevant environmental groups.
  - *Aboriginal community members* – to understand any cultural significance of the site, identify any potential impacts, inform project design and develop mitigation measures.
  - *Other potentially affected stakeholders* – to discuss concerns, identify potential impacts, inform project design and develop mitigation measures. This is likely to include owners and occupiers of adjacent land and those in the vicinity of the solar development.
- ***Mineral title holders*** – to understand the location and value of the resource, inform project design, identify potential access options and discuss the potential future uses of the land.
- ***Network service providers*** - to understand grid connection requirements and the design and location of connecting infrastructure to include in the project.

[6] *See Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010).*

# 4. Site selection

## 4.1 Importance of site selection

Good site selection provides an opportunity to avoid or minimise negative impacts at the outset, allowing the design and assessment of a project to focus on mitigating and managing unavoidable impacts.

The Department understands that there are many technical and commercial factors that applicants consider when selecting a site for a solar development. These include the proximity to the electricity network, available connection capacity or distance to towns, cities or other major energy users.

However, applicants must also consider environmental and other planning factors when selecting a site. If a suitable site is selected, it may limit the likelihood of significant environmental, economic or social impacts being caused by the development. This may also result in shorter assessment timeframes.

Sites with multiple environmental and planning constraints may still be capable of being developed in a sustainable manner with good design, innovation and appropriate mitigation measures in place. The consent authority is obliged to consider the merits of each application.

## 4.2 Key site constraints

While the following site constraints do not preclude large-scale solar energy development on certain land, they do indicate issues which may exist, and which can be helpful for applicants to identify and carefully consider in the site selection and design process:

- ***Visibility and topography*** – sites with high visibility, such as those on prominent or high ground positions, or sites which are located in a valley with elevated nearby residences with views toward the site. This is particularly important in the context of significant scenic, historic or cultural landscapes.
- ***Biodiversity*** – areas of native vegetation or habitat of threatened species or ecological communities within and adjacent to the site, including native forests, rainforests, woodlands, wetlands, heathlands, shrublands, grasslands and geological features.
- ***Residences*** – residential zones or urbanised areas.
- ***Agriculture*** – important agricultural lands, including Biophysical Strategic Agricultural Land (BSAL), irrigated cropping land, and land and soil capability classes 1, 2 and 3 . Consideration should also be given to any significant fragmentation or displacement of existing agricultural industries and any cumulative impacts of multiple developments.
- ***Natural hazards*** – areas subject to natural hazards such as flooding and land instability.
- ***Resources*** – prospective resource developments, including areas covered by exploration licences, and mining and petroleum production leases. Solar development applicants should seek advice from the Department of Planning, Division of Resources and Geoscience about the coverage of resources-related licences.
- ***Crown Lands*** – if any part of the project or associated transmission or distribution infrastructure will cross Crown Lands, it may be subject to legislative requirements that restrict access to the land.

*[7] The Department of Industry outlines the current datasets and terminology used to map agricultural land, see https://www.dpi.nsw.gov.au/agriculture/lup/agriculture-industry-mapping/agricultural-land-use-mapping-resources-in-nsw-user-s-guide.*

## 4.3 Process of site selection

Applicants that are considering sites with environmental and planning constraints are encouraged to discuss these issues with the Department and other relevant stakeholders during the scoping stage.

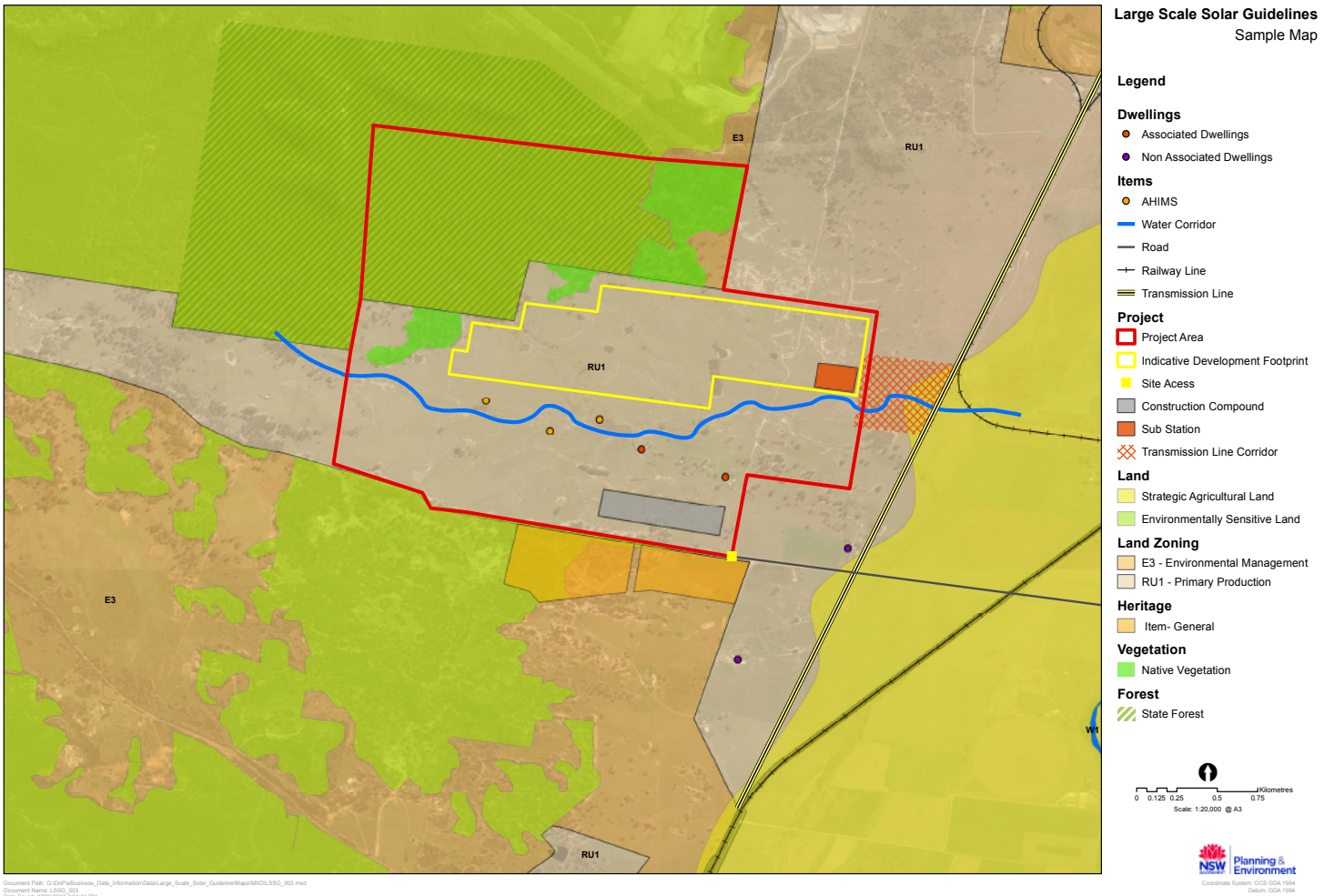
Applicants may wish to use a 'constraints mapping' exercise to assist in selecting a site. Geographical Information Systems (GIS) can be used if relevant spatial data is available.

Applicants should prepare a 'constraints map' that provides an overview of the key environmental and land use constraints on and around the project site.

This should include, but not necessarily be limited to:

- nearby residences and urban land
- biophysical strategic agricultural land (BSAL)
- Aboriginal heritage items
- historic heritage items
- threatened species and endangered ecological communities
- watercourses
- flood prone land
- existing infrastructure
- land use zoning
- any proposed vegetation screening.

A final version of the constraints map should be included in the environmental impact statement. Figure1 shows an example of a constraints map.




*Firgure 1 - Example of a constraints map*

# 5. Assessment issues

**The Department and consent authority assess State significant solar energy development applications in accordance with the considerations set out in section 4.15 of the EP&A Act.**

**This chapter highlights some of the common key assessment issues for large-scale solar energy development. However, this chapter provides general guidance only, and applicants must comply with each of the specific Secretary's Environmental Assessment Requirements (SEARs) issued for their application.**

### Key assessment issues

Applicants should be aware of the following issues that commonly warrant more detailed assessment for a State significant solar energy development:

- ***Strategic context:*** Whether the project is consistent with local or state planning strategies, and government policies such as climate change and energy policies, including the capability of the project to contribute to energy security and reliability. [8]
- ***Land use conflicts:*** assessment of the compatibility of the solar project with the existing land uses (particularly agricultural and residential land uses) on the site and adjacent land, during construction, operation and after decommissioning. This requires reference to the zoning provisions applying to the land, and consideration of post-development remediation. Remediation should involve removal of panels, footings, underground pipes and cables, and access roads, and reinstatement of soil profiles and land form based on pre-develoment soil surveys.
- ***Traffic and transport:*** consideration of whether the local and classified road network can accommodate the traffic generated by the construction of the solar project, and the need for any road upgrades and ongoing maintenance, having regard to any advice from relevant road authorities.
- ***Batteries:*** If the project includes battery energy storage, the applicant should undertake a preliminary risk screening in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*.[9] If the preliminary risk screening indicates the development is "potentially hazardous", a Preliminary Hazard Analysis (PHA) must be prepared in accordance with *Hazard Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis* (DoP, 2011) and *Multi-Level Risk Assessment* (DoP, 2011).

### Other issues that may be relevant

There are also other matters that may be relevant to a project warranting detailed assessment depending on the circumstances:

- ***Biodiversity:*** Where the proposed site contains native vegetation, habitat of threatened species, or ecological communities and requires clearing.
- ***Heritage:*** The likely impacts on cultural and archaeological objects, places and heritage (including Aboriginal objects and places).
- ***Visual impacts:*** The impacts on landscape character and values and the visual amenity of landholders and communities.

[8] *For further guidance on addressing electricity system security and reliability proponents should see the Department's publication Electricity System Security and Reliability Environmental Assessment Requirement: Guidance for proponents of State significant electricity generation projects.*

[9] *This process is outlined in Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (Department of Planning, 2011), http://www.planning.nsw.gov.au/Policy-and-Legislation/~/media/3609822D91344221BA542D764921CFC6.ashx.*

- ***Water:*** Surface water-related impacts, such as flooding and erosion, discharge/runoff and sediment control. If there is any water take associated with the project, the applicant should identify the source of water and may need to acquire water access licences if the project is approved.
- ***Hazards and risks:*** Any hazards or risks associated with the construction, operation and decommissioning of the solar energy project, including those associated with hazardous materials (for instance, from solar thermal energy and battery storage), and the threat of fire spreading to a solar development or being caused by on-site equipment or associated infrastructure such as cables, panels or transmission lines.
- ***Health:*** For instance, applicants should consider power frequency electric and magnetic field exposure guidelines[10] referenced by the Australian Radiation Protection and Nuclear Safety Agency.
- ***Waste:*** The waste likely to be produced during construction of the project (e.g., solar panel packaging), operation and decommissioning and rehabilitation, and how this would be managed.
- ***Cumulative impacts:*** Any cumulative impacts from any other developments (proposed, approved and operating), especially biodiversity, visual impacts, socio-economic and construction traffic impacts. For example, multiple solar developments in close proximity to each other may have a cumulative impact on other rural industries or adjacent land uses, amenity, biodiversity, visual effects or scenic landscapes.
- ***Social and economic impacts:*** Impacts, both positive and negative (including how they are distributed), of the proposed development on potentially affected people and groups. This includes workforce accommodation, job creation opportunities, and flow-on economic impacts to local communities.
- ***Noise:*** Construction noise impacts should be assessed in accordance with the Interim Construction Noise Guideline and operational noise impacts in accordance with the *NSW Noise Policy for Industry*[11].
- ***Public interest:*** including the public interest in renewable energy, the objects of the EP&A Act and the principles of ecologically sustainable development.

[10] *ICNIRP Guidelines for Limiting Exposure to Time-Varying Electric and Magnetic Fields (1 Hz – 100 kHz) 2010.*

[11] *https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017).*

# 6. State Significant Development process

**This chapter provides a high-level overview of the stages of the environmental impact assessment process for State significant development.**

## Scoping

Scoping Report
Secretary's Environment Assessment Requirements (SEARs)

## EIS Preparation

Environmental Impact Statement (EIS)

## Public Exhibition

Submissions

## Responding to Submissions

Submissions Report and Preferred Infrastructure Report (PIR)*

## Assessment

Assessment Report and
Recommended Conditions of Consent

## Determination

Approval / Refusal

## Post Approval

Compliance
Approval / Refusal of Modification

## 6.1 Scoping

Scoping is the first phase of the State significant development assessment process. It involves:

- ***Preparing a scoping report:*** The applicant identifies the matters that are likely to be impacted by the proposed project and engages with the community and other stakeholders to get their views on the issues that are important to them. The outcomes of this process are documented in a scoping report. The assessment issues in Chapter 5 will provide a useful starting point for this process.
- ***Issuing SEARs:*** The Department uses the scoping report to develop SEARs in consultation with relevant government agencies. SEARs set out the matters the applicant must assess in the EIS and the level of assessment required for each. The SEARs also set requirements for public engagement.

## 6.2 Environmental impact statement preparation

Applicants are required to prepare an environmental impact statement (EIS) to accompany their development application for State significant solar energy development. An EIS is a publicly available document which describes the proposed project for which approval is sought and its potential environmental, social and economic impacts in accordance with the SEARs. The purpose of an EIS is to provide information to decision-makers to support their assessment and determination of an application and to communicate information about the proposed project and its potential impacts to community and other stakeholders. Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (NSW) sets out requirements for the form and content of an EIS.

## 6.3 Public exhibition and responding to submissions

The Department will review the EIS to confirm its suitability for public exhibition. If not suitable for exhibition, the Department may request further information or clarification of information in the EIS. The Department makes State significant development applications publicly available for a period of at least 28 days.

During the submission period, any person may make written submissions to the consent authority about the proposed development. The Department notifies public authorities that may have an interest in the application.

After public exhibition, the Secretary will provide copies of any submissions made (or a summary of them) to the applicant and typically requests that the applicant review the submissions received. The Secretary may also request further assessment and/or engagement be carried out. The Secretary typically invites the applicant to submit a report that responds to any issues raised in the submissions. If changes to the project are proposed, the applicant must submit an amended development application, and it is recommended this be discussed with the Department first.

## 6.4 Assessment

The Department reviews the environmental impact assessment documentation submitted by the applicant and assesses the application in accordance with the requirements of the EP&A Act and relevant government policies and guidelines. Where an applicant has been requested to respond to submissions, the Department also considers how the applicant has addressed the issues raised.

On behalf of the Secretary, the Department documents its assessment in a report that is published and provided to the consent authority.

## 6.5 Determination

In determining an application for development consent, the consent authority evaluates the application on its merits, having regard to relevant assessment considerations under section 4.15 of the EP&A Act. The consent authority must either grant consent (with such modifications and on such conditions as the consent authority determines) or refuse the application.

The matters that a consent authority must consider when determining an application include the following (as relevant to the development):

- the suitability of the site for the development
- any submissions made
- relevant provisions of any environmental planning instruments
- the likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality
- the public interest.

If the consent authority is the Independent Planning Commission, it may hold a public meeting on the application.

Development consent for State significant solar energy development will typically be subject to a range of conditions for managing and mitigating the impacts of the development.

## 6.6 Post approval

**Management plans**

Conditions of consent may require certain management plans to be approved by the Secretary prior to the commencement of construction or operation. On behalf of the Secretary, the Department generally takes around 60 days to approve these plans. Therefore, to prevent delays, it is recommended applicants factor this time into their delivery schedule and submit management plans to the Department for approval well in advance of commencement the relevant activities.

**Compliance**

The person carrying out the development is responsible for compliance with the conditions of consent under the EP&A Act, including any conditions in respect of rehabilitation and decommissioning. The Department's compliance team is responsible for monitoring compliance with the conditions of consent for approved State significant solar energy development.

To make sure applicants are complying with conditions of consent, the Department's compliance team: conducts spot checks and unannounced visits to projects and undertakes surveillance; reviews compliance and monitoring reports prepared by project operators, conducts periodic compliance audits; meets with the community and industry; and investigates complaints and suspected non-compliances in accordance with the Department's compliance policy.[12]

**Modifying an approved project**

There are occasions where an applicant may need to change an approved project (e.g. by adding battery storage). A modification of a development consent must be approved under the EP&A Act.

[12] *Further information about the Department's compliance and enforcement policies and activated can be found at http://www.planning.nsw.gov.au/Assess-and-Regulate/Compliance-functions.*

***For more information, contact:***

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