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solarcities

Programme **Guidelines**

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1 Background and Context

In June 2004, the Prime Minister announced the $75 million Solar Cities programme where distributed solar technologies (including solar thermal and photovoltaic technologies), energy efficiency, load management, smart meters and cost-reflective pricing will combine in large-scale grid-connected urban sites to trial new sustainable models for electricity supply and use. This initiative forms part of Australia's long-term greenhouse response in the energy sector to move towards integrated use of low-emission supply technologies, distributed generation, significantly enhanced energy efficiency and markets that deliver responsive and effective price signals.

The Solar Cities programme is consistent with the directions set by the Ministerial Council on Energy (comprising Commonwealth, state and territory ministers responsible for energy) and will inform future greenhouse and energy market policy. It is anticipated that the first critical infrastructure components and market arrangements will be in place in 2006-07 and that the projects' impacts will be carefully monitored, analysed and reported through to 2012-13.

Key expected outcomes of the Solar Cities programme include reduced impediments to the uptake of distributed solar generation; a critical mass[1] of solar technologies and energy efficiency and load management measures; enhanced technology leadership in the development of photovoltaic systems; real world application of smart meters; and cost-reflective pricing to enable these technologies to be appropriately valued. The projects will enable the collection of valuable data to assess the impact that solar technologies, energy efficiency and load management measures have on electricity supply and demand profiles (in particular peak loads), investment in electricity network augmentation, greenhouse gas emissions intensity and the physical operation of the electricity system in the region.

2 Challenges

The Solar Cities programme is designed to explore options to address a number of challenges in delivering sustainable energy outcomes in Australia. In the past, funding has been provided by all levels of government for separate programmes seeking to address electricity market issues such as volatile demand patterns and modest uptake of solar and energy efficient technologies (these issues are discussed below). However, such initiatives have not become self-sustaining due to a range of factors including financial and other market constraints, lack of a system-wide approach, technology prices, structural change inertia, consumer attitudes and insufficient critical mass.

The Solar Cities programme aims to overcome these challenges by bringing together expertise and interested parties from across the electricity supply and demand sectors.

Growth in Electricity Demand

In the past two decades electricity demand has more than doubled. Electricity is also the single largest source of greenhouse gas emissions in Australia. Australia's energy needs continue to grow rapidly, with the Australian Bureau of Agricultural and Resource Economics[2] estimating that net electricity demand will rise by around 50 per cent by 2020. Increasing penetration of air conditioning systems and electrical appliances in homes and businesses is a key driver of this trend. Over the past decade, electricity demand has become increasingly volatile, with the growth in peak loads far outstripping average demand. In South Australia for example, the summer peak load (~2600 MW) is almost double the average demand (~1500 MW), while demand for electricity on a hot summer's day can exceed demand on a mild summer's day by more than 1000 MW (see Figure 1).

[1] In the context of the Solar Cities programme, 'critical mass' refers to the minimum quantity of each of the implemented technologies and measures required to provide the information necessary to make decisions regarding the cost-effectiveness of larger-scale adoption of each of these technologies and measures with respect to moderating future electricity supply and demand profiles (particularly for peak loads) and deferring investment in electricity infrastructure. Achieving critical mass may not require 100 per cent penetration of technologies and measures across the project site.

[2] ABARE (2003), *Australian energy: national and state projections to 2019-20*, report for the Ministerial Council on Energy, June 2003

High growth rates in peak demand are anticipated to continue into the foreseeable future.

Volatile demand patterns can lead to a number of electricity market problems that tend to put upwards pressure on the cost of supplying electricity, including:

- high spot market prices for electricity (more than 100 times the average price);
- inefficient investment in network and generation infrastructure (with billions of dollars worth of network assets used to meet peak demand for only a few days each year); and
- network failures and supply disruptions.

Much of this spot market volatility is dampened at the retail level through the use of financial contracts. This is an appropriate mechanism for managing risks. However, the cost of managing this volatility can be passed through to consumers in the form of higher retail tariffs.

To protect domestic and small-scale commercial consumers from large market fluctuations, retail prices for electricity are typically levied at a fixed flat rate (regulated retail tariff). For these customers, there is no clear link between the high cost of electricity during periods of high demand and the price they pay for electricity. This disconnection between cost and price contributes to a growing need for investment in peak electricity infrastructure.

The Solar City projects provide an opportunity to modify this growth trajectory in specific locations by encouraging distributed solar technologies, promoting the adoption of energy efficiency and load management measures, and introducing cost-reflective pricing to motivate consumers to better manage and value their electricity use.

Solar Technologies

The Australian Government recognises that Australia has developed cutting-edge solar technologies, particularly in the photovoltaics sector, and wishes to facilitate the expansion of the domestic market through increasing distributed electricity generation as a contribution to managing Australia's growing electricity demand and greenhouse gas emissions. Australia's climate, settlement patterns and electricity use profile offer a supportive environment for domestic uptake if cost structures can be reduced. Export opportunities also exist, as demand for photovoltaic and other solar technologies in the Asia-Pacific region is potentially large.

However there are a number of challenges to increasing the uptake of solar technologies in Australia. For example, unlike centralised forms of electricity generation, consumers face the high up-front capital costs associated with photovoltaic and solar thermal systems. Although these costs are typically paid back over the life of the investment through lower electricity bills, the initial costs are a significant hurdle for consumers considering installing solar technologies. If these costs were spread over the lifetime of the technology, through financial arrangements such as a lease or buy-back agreement with energy utilities, consumers may be more likely to install solar technologies.

There are also electricity market arrangements that potentially support the increased uptake of solar technologies. As a form of distributed generation, solar energy can reduce the need for electricity distribution and peak generation infrastructure — something not fully recognised in the market. For example, peak output from photovoltaic systems can line up closely with peaks in demand for electricity, generally hot days with high airconditioner usage (see Figure 2).

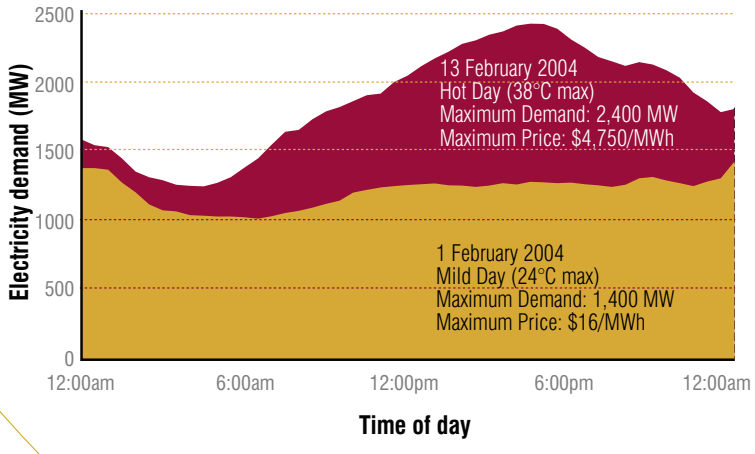


Figure 1: Electricity Demand and Price

This figure compares electricity demand in the South Australian electricity system on a mild summer's day and hot summer's day. The maximum demand reached on the hot day was around 1000 MW higher than the mild day. The price of electricity on the spot market increased dramatically on the hot day, reaching a maximum 300 times higher than that of the mild day. The extent to which this spot price impacts on the underlying cost of electricity depends on the financial contracts in place [3].

[3] Sources: ROAM Consulting (2002), unpublished data; ABARE (2002), *Australian Energy Outlook to 2019-20*

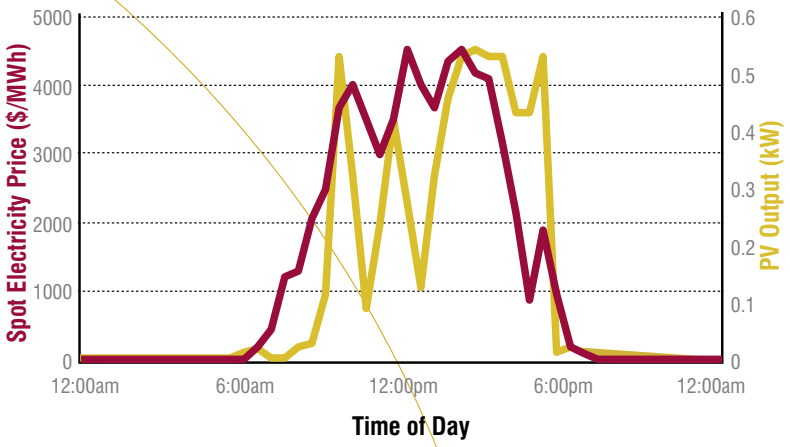


Figure 2: Electricity Price and Photovoltaic Output (Adelaide, 8 Feb 2001)

This figure demonstrates that the output profile of a photovoltaic system can closely match the extremely high spot electricity prices that can be experienced during the summer peak period. Although photovoltaic systems in these circumstances are reducing the exposure of retailers to these extremely high prices, the market generally reimburses the owners of photovoltaic systems for only the flat rate retail price for any surplus electricity they export back to the grid (which can be as low as 5–10% of the peak price)[4].

Higher prices and volatility in the spot market can signal the need for new investment in infrastructure. Benefits from using solar technology include off-setting peak demand and thereby delaying network augmentation and improving network stability. However there is more scope to value solar technologies' capacity to offset peak demand by trading a large block of solar generated electricity in financial markets. Such financial market arrangements require further development, a role that the Solar Cities programme is intended to help facilitate.

The relatively small size of the Australian market also reduces the cost-competitiveness of photovoltaic technologies compared with centralised generation. Although the market has grown steadily by around 15 per cent over the last three years, the low level of demand for photovoltaic systems restricts available cost savings in their manufacture. As a result consumers do not benefit from potential economies of scale that would allow the sector to appreciably reduce its cost structure.

Other challenges for increasing the uptake of solar technologies are the processes and requirements for connecting photovoltaic systems to the electricity grid, planning arrangements, power storage issues and buy-back rates. Simplified and standardised procedures for connecting photovoltaic systems and optimised planning protocols that recognise solar access would reduce the delays currently experienced by some consumers and facilitate greater uptake of solar technologies. Solar Cities will encourage electricity market participants to develop new commercial models and supporting infrastructure to enhance the uptake of solar technologies.

Electricity Demand Management

Electricity demand management uses a range of strategies to modify the level and timing of electricity demand. It enables electricity suppliers to meet their customers' needs, by either shifting or reducing demand peaks, and includes actions by consumers or electricity market participants (eg retailers, distributors, or generators). Strategies may include energy efficiency measures and energy saving technologies and practices, such as insulation, design and automated control systems. Load management initiatives can also play a role, for example, peak lopping, load shifting and cost-reflective pricing. These measures can reduce the difference between peak and off-peak demand, and hence reduce the need for expensive peak generation equipment and reduce the risk profile for electricity retailers.

Increasing the uptake of commercially attractive energy efficiency and load management opportunities has the potential to deliver substantial economic and environmental benefits. Recent estimates compiled for the National Framework for Energy Efficiency show that implementing half of all energy efficiency opportunities with a payback of four years or less could, if commercial, increase GDP by $975 million per annum and reduce greenhouse emissions by around 10 million tonnes per annum of carbon dioxide equivalent.

[4] Source: taken from M.E. Watt, M. Oliphant, H. Outhred, R. Collins, *Using PV to meet Peak Summer Electricity Loads*, ANZSES Conference, Melbourne 2003.

Considerable evidence exists that impediments are preventing the optimal uptake of energy efficiency in Australia. These impediments include:

- price signals and market arrangements that do not fully value the benefits from energy efficiency;
- arrangements where energy users have little incentive to manage energy use effectively; and
- a lack of information about energy efficiency opportunities and cultural barriers within the business community, resulting in decision makers being unaware of potential commercial opportunities.

Similar impediments exist for load management measures, which can include the provision of responsive and effective price signals that encourage consumers to reduce their energy consumption, particularly during peak times. Load management offers a flexible and distributed alternative to upgrading constrained networks or generation capacity. Cost-reflective pricing arrangements (where some component of the real cost of electricity supply is revealed), smart metering, and mechanisms to share the benefits of energy savings are necessary to enable consumers to actively respond to price signals associated with supply constraints.

For example, flat-rate electricity tariffs provide no financial incentive to modify energy use during periods of high cost. In Solar Cities, the potential benefits from smart meters and cost-reflective pricing arrangements could be shared by end users through their responses to price signals, retailers through reduced exposure to high wholesale market prices, network service providers through reduced system congestion, and system operators through increased system reliability. This split incentive can make it difficult to capture the potential value of demand management.

3 Opportunities

The Solar Cities programme provides an opportunity for at least four projects in discrete urban grid-connected areas across Australia to participate in new sustainable models for energy production and use.

The Australian Government has allocated funding to support solar technologies in conjunction with smart meters, energy efficiency and load management measures into existing and new residential and commercial buildings. The Australian Government intends to work with industry, the community and state, territory and local governments to introduce improved market signals, such as pricing to encourage wise use of energy, and streamlined planning approvals to appropriately reward technologies and behaviours that reduce system-wide energy costs.

The programme will draw on the experience and expertise of electricity market participants, energy service providers, state, territory and local governments, and community groups to explore a range of creative market solutions to demonstrate sustainable energy outcomes. It is the Australian Government's expectation that these groups will develop new strategic partnerships, which will enable the replication of the Solar Cities concept once the trials are complete.

The programme is expected to impact on electricity supply and demand profiles, in particular peak loads in the Solar Cities thus reducing the need for new network and peak generation investments and increase network reliability.

As a demonstration model, there will be valuable lessons that emerge from the Solar Cities that will be shared during the programme and could lead to improved market arrangements in the short term. The programme is expected to stimulate electricity utilities, energy service providers and financial institutions to test new business models for delivering reliable and sustainable electricity in a low financial risk environment. It is also expected to provide valuable information to policy and decision makers by demonstrating the potential long-term system benefits of distributed solar technologies, energy efficiency and load management measures. Householders and businesses should benefit through having greater choice in sourcing their electricity and receiving rewards for more actively managing energy use.

The Solar Cities programme will provide support to the photovoltaic industry by capitalising on Australia's long-term technology leadership in the development of photovoltaic systems. Industry development benefits should also flow to other energy service providers such as manufacturers and installers of energy efficiency products, solar water heaters and smart electricity meters.

4 Public Consultation

These Solar Cities Programme Guidelines were finalised following the release of draft programme guidelines in a Statement of Challenges and Opportunities and the conduct of a public consultation process in December 2004 and January 2005. The Guidelines provide information on programme eligibility, selection criteria, the assessment process, legal principles and the development of proposals for funding under the Solar Cities programme. The Guidelines apply to both the expression of interest (EOI) and the subsequent tender phase where short-listed consortia will be invited to prepare detailed business cases.

In response to stakeholder comments, information requirements for the EOI phase have been designed to reduce the administrative burden on interested parties and ensure that innovative but conceptual ideas can still be brought forward, noting that it is advantageous to submit proposals that are as comprehensive as possible. An EOI (application) form and accompanying notes have been prepared so that interested parties can submit compliant proposals for Solar Cities funding.

5 Objectives

The Solar Cities programme has two objectives, to:

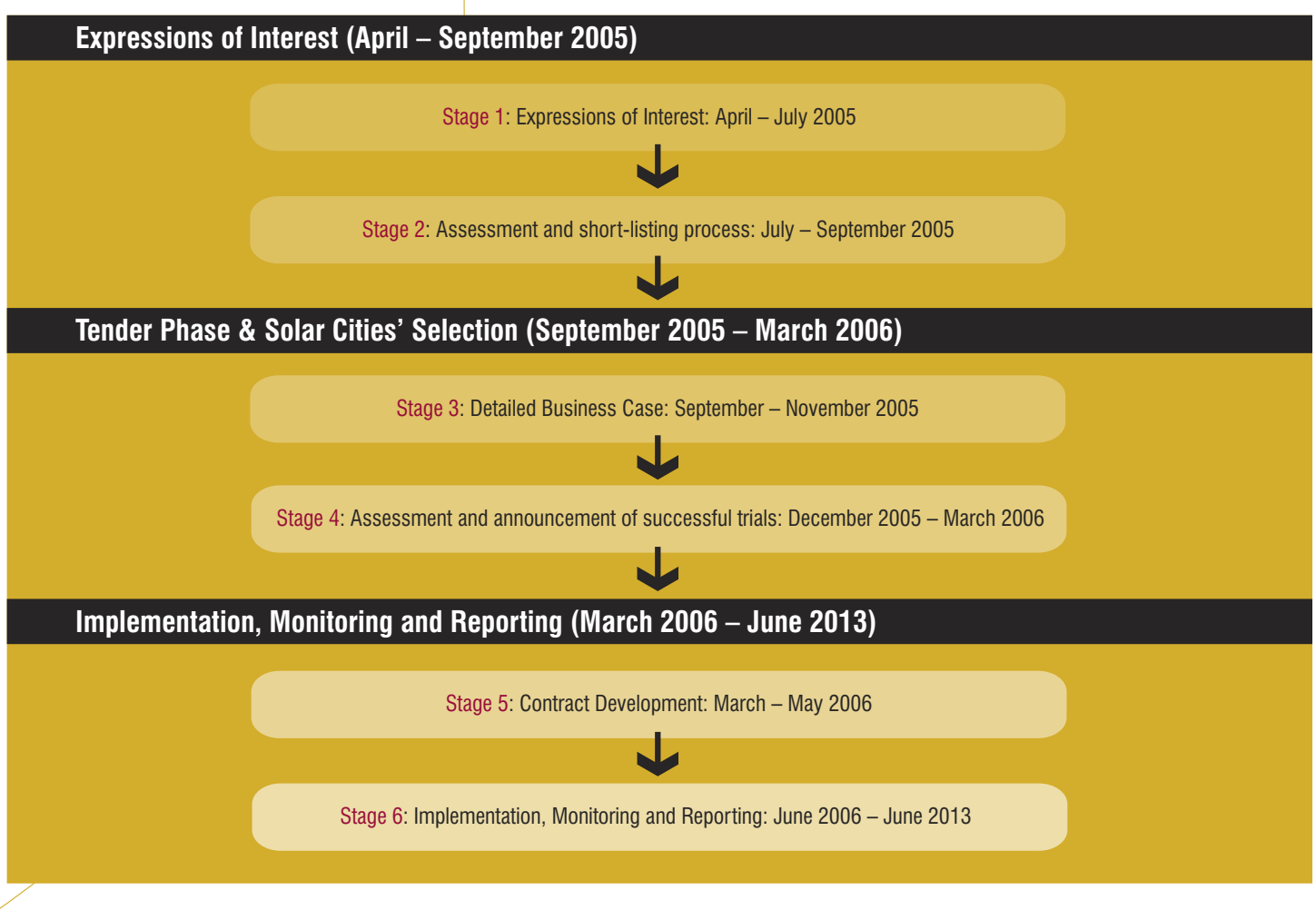
- demonstrate the economic and environmental impacts of integrating cost-reflective pricing with the concentrated uptake of solar, energy efficiency and smart metering technologies; and
- identify and implement options for addressing barriers to distributed solar generation, energy efficiency and electricity demand management for grid connected urban areas.

6 Timeframe

Nine years (2004-05 to 2012-13) have been set aside for the Solar Cities programme. The Australian Government is keen for technologies and supporting infrastructure to be installed quickly, following public consultation and selection of the Solar Cities. It is expected that by 2008-09 the Solar Cities will be largely implemented, with monitoring and reporting commencing as soon as Solar City sites are identified and continuing through to 2012-13.

The timeframe for selection of Solar Cities is outlined in Figure 3 below.

Figure 3: Solar Cities Selection Flowchart



7 Eligibility & Selection Criteria

Solar Cities is a competitive merit-based programme. Proposals will be assessed against the eligibility criteria and, if eligible, will then be considered and assessed against the core and desirable selection criteria. Funds are limited and only the best EOI proposals will be short-listed and invited to develop detailed business cases at the tender phase. Upon submission of detailed business cases, a second assessment process will take place, culminating in the offer of funds to successful Solar City consortia. More information on the assessment process can be found in Section 10 of these Guidelines.

The following eligibility and selection criteria apply to both the EOI phase and the subsequent tender phase. Proposals must satisfy each eligibility criterion and should address each of the selection criteria.

The Government recognises that, at the EOI phase, proponents may not have finalised the composition of their consortium and may only have a conceptual framework for some aspects of their proposal. Where this is the case, proponents will be expected to indicate their preliminary ideas and the processes they intend to follow to address any unresolved issues during the tender phase. Proponents should note, however, that it is to their advantage to provide sufficiently detailed information to enable the EOI proposal to be assessed and judgements to be made on which proposals will move forward to the tender phase. Proponents who are successful at the EOI phase will be expected to provide comprehensive information in relation to the criteria in setting out their business case at the tender phase.

Application forms and accompanying notes will provide guidance on the level of information required in each phase.

Eligibility Criteria

To be eligible for consideration against the selection criteria referred to below, **all** of the following eligibility criteria **must** be met:

(a) The organisation[5] that will lead and manage the implementation of the Solar City project must be:

- an incorporated body that is located in Australia, including Government Business Enterprises;
- a local government body; or
- a statutory authority.

(b) The proposal is technically feasible[6].

(c) An integrated proposal that includes each of the following technologies and measures:

- photovoltaic technologies[7];
- smart metering technologies;
- energy efficiency measures;
- load management measures[8], including cost reflective pricing.

(d) The proposal is focused on existing buildings and may include a component of urban renewal or greenfield sites.

(e) Consortium proponents are financially viable.

[5] Consortium members may be unincorporated joint ventures at the time they submit their EOI proposal. The Australian Government, however, expects consortia which are short-listed and invited to develop a detailed business case to be a legally incorporated body by the time they submit their tender or alternatively a member of the consortium will be the 'prime' organization that leads and project manages the implementation of the Solar City project and contractually commits to and liases with the Department of the Environment and Heritage.

[6] For the purposes of the Solar Cities programme, technical feasibility relates to the use of substantially proven technology.

[7] Provided that a large-scale, stand-alone PV system is connected to the electricity grid and is in the same general area as other Solar City activities, it will be eligible for support under the Solar Cities programme.

[8] Technologies such as solar thermal and energy storage may be included as load management measures in a proposal but they are not mandatory.

Selection Criteria

Where proposals meet the eligibility criteria, they will be assessed against the following core and desirable selection criteria. Each of the core criteria is of equivalent weighting. The core criteria are of greater significance than the desirable criteria. Each of the desirable criteria is of equivalent weighting.

Core criteria

The extent to which the proposal demonstrates:

(a) uptake of photovoltaic technologies.

(b) potential to impact future electricity supply and demand profiles in the Solar City over the period of the project, in particular for peak loads.

(c) potential to defer future investment in electricity infrastructure arising from the implementation of the Solar City project.

(d) the use of a business model that addresses the key elements of the Solar Cities programme set out in eligibility criterion (c) and provides information to enable widespread commercial application.

(e) pricing arrangements that optimise the benefits of photovoltaic and smart meter technologies and energy efficiency and load management measures and better reflect the real costs of electricity supply to consumers at the time of use.

(f) community support[9].

(g) arrangements for, and access to, real-time measurement and monitoring of energy data.

(h) impact on projected energy use and greenhouse gas emissions for the Solar City over the period of the project[10].

(i) effective risk management, consumer education, community engagement and exit strategies[11].

(j) the use of measures and technologies that can be readily deployed into existing building stock[12].

(k) the proponent's capabilities to deliver the proposed project outputs on time and within budget.

(l) support (either cash or in-kind) from sources other than the Australian Government, noting that the Australian Government is seeking 50 per cent leverage of total costs associated with each Solar Cities project[13].

(m) expenditure by programme participants in adopting the technologies and measures being promoted by the consortium.

(n) acceptance of the legal principles in these guidelines (Attachment A).

[9] It is recognised that at the EOI phase, there will be less opportunity to demonstrate community support than at the tender phase. Nevertheless, even at the EOI phase, it is expected that proponents will be able to provide some evidence of community support from organisations such as local councils, companies, and community organisations.

[10] It is recognised that the level of greenhouse gas abatement achieved by each Solar City project will be influenced by the (marginal) emission factor of the electricity displaced at a location, an issue outside the control of consortia. This characteristic of the project site will be a consideration when taking account of estimated greenhouse gas abatement during the assessment of proposals. For simplicity, State based average emission factors will apply to the calculation of greenhouse abatement during the EOI phase. Marginal emission factors may be used during development of detailed business cases.

[11] These strategies will need to be developed fully as part of the business case presented at the tender phase. At the EOI phase, only a brief outline of the approach to be adopted in each strategy is required.

[12] It is recognised that it may be easier and more cost-effective to install solar and smart meter technologies and implement energy efficiency measures in a greenfields or urban renewal site. It is also recognised that results may be easier to achieve by working from planning stage to completion through intermediary partners such as planners, developers and builders rather than negotiating with large numbers of consumers in relation to existing built infrastructure. However, the number of new residential dwellings built each year represents only around 2% of the total and, given the longevity of existing residential and commercial building stock and its significance with respect to energy use, the Australian Government expects Solar City proposals to have a greater focus on existing buildings compared to greenfield or urban renewal sites.

[13] Some state governments are already working to improve building industry and community awareness and adoption of residential energy efficiency in the new homes market with the introduction of minimum energy efficiency standards and supporting legislation. Where Solar City proposals include greenfields or urban renewal components, assessment will take account of the extent to which these components go beyond the measures and standards already required by the relevant state government and the Building Code of Australia.

The Australian Government is seeking 50% of total eligible expenditure from a consortium for an agreed project. Consortium members, collectively, must be able to demonstrate that they can provide sufficient funding from approved sources over the life of the Solar City project period. Consortia will also need to demonstrate they can fund any costs of the proposal not covered by the Solar Cities grant, where this is applicable.

Consortia do not have to have all of their eligible contributions available at the time an EOI is submitted. However, consortia will need to demonstrate that their funding contribution can be made progressively available at the rate eligible expenditure is incurred on the Solar City project.

For project expenditure to qualify as eligible expenditure it must be incurred on or after the project commencement date (which date cannot be before the date of execution of the funding agreement) and on or before the specified completion date (with the exception of final audit costs). All costs incurred must be paid within three months of the specified completion date of your project including audit costs. The date for completion of your project is generally June 2013.

It is also a requirement that a consortia's expenditure relates to eligible activities on the approved project. That is, expenditure directly related to the deployment of photovoltaic and smart meter technologies, energy efficiency or load management measures in the Solar City. All eligible expenditure should be net of GST.

Desirable criteria

The extent to which the proposal demonstrates:

(a) guaranteed and timely post-sales support for any technology installed and measures implemented.

(b) development and retention of intellectual property in Australia.

(c) the introduction of changes in policies, guidelines or mandatory requirements that facilitate the adoption of photovoltaic and smart meter technologies, energy efficiency and load management measures, including cost-reflective pricing.

(d) potential for change in community attitudes and behaviour in relation to the efficient use of energy and uptake of new technologies over the course of the project.

(e) other economic, environmental or social benefits[14].

8 Guiding Principles

Number and location of Solar Cities

The Solar Cities programme aims to support at least four Solar City projects in grid-connected urban centres across Australia. The Australian Government anticipates a number of competitive proposals from each jurisdiction. It is expected that proposals will be developed by consortia to suit the particular characteristics of the proposed location (such as local electricity demand patterns, network and generation capacity, mix of existing and new buildings, and size and composition of household and commercial participants that could potentially deliver the outcomes sought). The final decision on the number of projects will in part depend on the quality of proposals received.

To facilitate monitoring and reporting of the impact of project measures and the potential change to electricity supply and demand profiles and electricity infrastructure investment, it may be preferable that Solar City projects are contained within a single electricity distribution area. Such an approach may benefit electricity market participants by offsetting the need for future generation or augmentation of specific distribution and/or transmission assets. Proposals that cover two or more electricity distribution areas will not be excluded.

Solar Cities will facilitate the incorporation of technologies and measures into existing and new, residential and commercial buildings and industry facilities, which may include public housing, rental and leased premises. The focus should be on existing building infrastructure, with urban renewal or greenfield infrastructure eligible as a component of a proposal.

Technologies and measures

Technologies and measures that must be included in a Solar City project are photovoltaic and smart meter technologies and energy efficiency and load management measures, including cost-reflective pricing. Other technologies such as solar thermal and energy storage may be included in a proposal but they are not mandatory. To facilitate an integrated approach, it is expected that successful bids will, at a minimum, install a critical mass of each of these technologies and measures. This does not rule out the adoption of a phased approach to the roll-out of initiatives such as a smaller-scale trial prior to larger-scale implementation in the Solar City.

Technology and equipment design and manufacture is to comply with relevant and accepted Australian standards. Installation is to be undertaken using suitably qualified personnel and is to meet relevant Australian standards.

The Solar Cities programme will not provide funding for the installation of individual assets or individual small-scale projects outside the Solar City.

Solar City projects could include an element of commercialisation with respect to technologies or concepts that are substantially proven and can be implemented within the timeframe of the Solar Cities programme. However, the programme will not support research and development activities.

The programme will not support proposals that are primarily directed towards advertising and marketing.

Proposal development

It is recognised, that there are considerable challenges associated with the formation of a consortium and the development of a comprehensive Solar City proposal and that some aspects of a consortium's proposal are likely to be incomplete or preliminary in nature at the EOI phase. Areas that might require further development and investigation could include consortium membership, project costing, confirmation of funding available from consortium members or third parties, and some of the details of the technologies, measures and delivery mechanisms forming the basis of the proposal. Other than matters specified as eligibility criteria, incomplete development of the details of the proposal will not prohibit a consortium participating in the EOI phase and the application form and accompanying notes for the EOI phase have been designed accordingly. At the EOI phase, consortia will be expected to identify any aspects of their proposal that are incomplete or conceptual in nature and any related unresolved issues. Consortia will be required to indicate how these issues will be addressed in the period leading up to,

[14] 'Other economic, environmental or social benefits' refers to benefits which are additional to those already addressed in other selection criteria.

and during, the subsequent tender phase. As judgements will be made at the EOI phase to identify those proposals that should proceed to the tender phase, it is important that consortia provide sufficiently detailed information to enable an assessment of their EOI proposal.

At the tender phase, consortia will be required to develop detailed and transparent project budgets, as well as risk management, exit, intellectual property, consumer education, and community engagement strategies as part of their proposals. A separate application form and accompanying notes that can be used to tender for Solar Cities funds will be provided to those consortia short-listed to provide detailed business cases.

Consortia membership

The formation of a Solar City consortium will assist interested parties to interact effectively with each other and submit a coordinated proposal that provides an integrated range of goods and services which meet the programme's objectives. It will be important to ensure that, collectively, the consortium possesses all the relevant skills and attributes required to deliver a successful Solar City project, noting that consortium members may collaborate in more than one Solar City proposal.

Consortia should carefully consider the best management and governance arrangements to suit their membership and the nature of the proposal. Other than the Australian Greenhouse Office's requirement to contract with a single entity to ensure central management of each Solar City project, there is no blueprint for the governance of a consortium. The structure of the entity that deals with the Australian Greenhouse Office could involve a single entity leading the consortium in effect as a 'prime contractor' or the formation of a separate incorporated body. Consortia may subcontract the performance of part of the project to third parties noting that the costs of doing so will need to qualify as eligible expenditure if the consortium wishes to recoup these expenses from the Solar City grant. In undertaking a Solar City project, the consortium will be responsible for the performance of the entire project, notwithstanding that implementation of parts of the project may be undertaken by subcontractors.

Parties that could be involved in the Solar City projects through membership of a consortium include, but are not limited to, the following:

Electricity generators, retailers and network service providers – electricity suppliers can all benefit from a reduction in the rapid growth of load or peak electricity demand, in spite of their different risk profiles and operating environments. Key elements of support could include active participation in demand management strategies; offering a choice of rewards for electricity consumers who use energy efficiently, reduce demand and shift demand away from peak periods; developing contract arrangements that optimise and share with consumers the benefits provided by the uptake of solar and energy efficient technologies; implementation and promotion of simplified and standardised connection agreements for small intermittent distributed generators; provision of electricity data to enable independent monitoring and reporting of outcomes from the project; and development of arrangements to ensure participating consumers' electricity accounts will not increase as a result of this initiative (noting that a range of other factors including amount of use and cost of supply will also influence electricity accounts)[15].

Manufacturers, suppliers and installers of solar, smart meter, and energy efficient technologies; energy service providers; and energy management companies – active participation of these groups is important for creating a market for distributed generation and demand management strategies and building industry capacity and capability. Key elements of support could include adoption of standards, training, accreditation processes and component testing to improve quality, reliability and performance; streamlined supply and installation arrangements to improve integration, efficiency and system performance; development of product solutions for different market segments; investment in designs that maximise the output of solar technologies such as tracking, concentrator and storage systems; assistance to consumers in identifying and installing energy efficiency options; adoption of mechanisms that pass on savings from economies of scale to consumers; and guaranteeing responsive post-sales support.

Financial institutions – financial institutions could assist in the development of flexible packages for consumers including those that reduce up-front capital expenditure for technologies and measures adopted through Solar City projects.

[15] The Australian Government wishes to ensure that in designing and implementing arrangements that better reflect the value of using solar energy and other demand side action, consortia consult industry and governments to make certain that measures are in place to address possible variable price impacts of the Solar Cities programme on consumers during the project period. This could be achieved through a variety of mechanisms including underwriting potential cost impacts up to a capped amount, making provision in contracts to offset or credit consumers where certain conditions are met or provision of incentives of equivalent value to projected cost impacts. Consortia must ensure that participants in the programme are aware upfront of potential consumer cost implications.

Building developers and architects – these groups play a role in raising consumer awareness of the benefits of solar and smart meter technologies, and energy efficiency and load management measures. Key elements of support could include adoption of standards, training and accreditation processes that promote sustainable technologies and design features that deliver best practice.

Community and business groups – participation of local householders and commercial enterprises in a Solar City project is essential to its success. Community and business groups (e.g. chambers of commerce or industry associations) could play a role in encouraging the participation of households and businesses in Solar City projects.

A register of interest has been established with over one hundred and twenty enterprises, community groups and individuals interested in participating in the Solar Cities programme (www.greenhouse.gov.au/solarcities/index.html). Consortia are encouraged to include these interested groups in their Solar City proposals as this will allow any benefits from business propositions that are trialled to be shared throughout the community. There is no requirement for interested parties to register and registration does not automatically guarantee participation in a Solar City consortium. Failure to register does not preclude an interested party from forming or participating in a Solar City consortium.

Key elements of support from community and business groups could include facilitating a range of community engagement activities targeting both householders and businesses, including newsletters, 'town hall' meetings, open days, and demonstration houses.

State and local governments – involvement of state, territory and local governments will be important in ensuring successful implementation of Solar City projects, given jurisdictions' responsibility for electricity pricing arrangements and councils' close ties to the community. It is envisaged that state and territory governments would offer a standard suite of support and conditions to all consortia within their jurisdiction to underpin Solar City proposals. Key elements of support could include enabling cost-reflective pricing and optimisation of the uptake of solar and energy efficiency technologies and design through regulatory or planning arrangements.

Community support, engagement and education

To be successful, consortia will need to secure the support and participation of local householders and businesses in the Solar City projects. To ensure this important component of the programme is addressed, proposals will be required to include a comprehensive consumer engagement strategy. It will also be important to consider an ongoing education strategy to ensure the potential benefits of the Solar Cities programme continue to be realised. The Australian Greenhouse Office is developing a communications strategy for the Solar Cities programme which will clarify the respective roles of the consortia and the Australian Government in promoting the programme and providing information on programme developments and project outcomes to business and the broader community. It is anticipated that the communications consultant will be available to provide some guidance to short-listed consortia invited to develop detailed business cases on their communication needs.

Monitoring and reporting

Effective data collection and monitoring arrangements will be critical to the success of the Solar Cities programme. Relevant data will need to be collected and analysed in order to assess the nature and extent of economic and environmental costs and benefits associated with the integrated package of technologies and measures deployed in Solar City projects. Energy use will need to be monitored before and after implementation for the selected Solar Cities and possibly also in a control population. The Australian Greenhouse Office is developing a monitoring and reporting strategy for the programme and will appoint an independent agent to collate, analyse and report the outcomes from each Solar City project and the programme overall. More information on how this will be undertaken and the roles and responsibilities of consortia can be found in Section 10.

Intellectual property

Proponents must demonstrate that they are able to manage any intellectual property employed in, or arising from, their Solar City project. This includes, where relevant, identifying and managing:

- any intellectual property expected to be created as a result of the project;
- who will own the intellectual property;
- the measures to be put in place to protect intellectual property created as a result of the project; and
- any intellectual property to be used in the project, and measures that will be put in place to protect it.

Proponents must provide documentation that describes how intellectual property rights related to the project will be apportioned and managed among consortium members and the arrangements for agreed use by the Commonwealth in promoting outcomes of the Solar Cities programme. Consortium members should refer to the key legal principles (Attachment A) regarding intellectual property issues.

Confidentiality

Information supplied by proponents as part of the EOI and tender processes will be treated sensitively by the relevant Commonwealth departments (Australian Greenhouse Office and the Department of Industry, Tourism and Resources) and the relevant expert, technical and financial panels. Proponents should identify any specific information which is to be treated as confidential and advise why it needs to remain confidential.

The Australian Greenhouse Office is subject to the legislative and administrative accountability and transparency requirements of the Commonwealth, including disclosures to the Parliament and its Committees. The Australian Greenhouse Office may disclose, or allow at any time the disclosure of, any information contained in or relating to any proposal:

- to its advisers or employees solely in order to evaluate or otherwise assess the EOI proposal and subsequent detailed business case;
- to its internal management personnel for purposes related to the proposal and subsequent tender process;
- to the responsible Ministers;
- in response to a request by a House or a Committee of the Parliament of the Commonwealth of Australia;
- within the Australian Greenhouse Office, or with another agency, where this serves the Commonwealth's legitimate interests;
- where the information is authorised or required by law to be disclosed, noting that all information submitted to the Australian Government is subject to the *Freedom of Information Act 1982* and its requirements; or
- where the information is in the public domain otherwise than by the Commonwealth's disclosure.

Key legal principles

The Commonwealth has established a set of key legal principles (Attachment A) that will form the basis of the Deed of Agreement. The Deed of Agreement will set out the terms and conditions under which the Commonwealth will provide financial assistance to successful consortia under the Solar Cities programme.

To ensure that consortia are aware of these legal principles at the EOI phase and have considered the potential impact on their Solar City proposal, consortia must indicate acceptance, partial acceptance or rejection of each legal principle. Provision has been made in the EOI application form for consortia to provide an explanation where a legal principle has been partially accepted or rejected and to include suggestions to overcome the identified concerns or risks.

Successful consortia that have been short-listed at the EOI phase and invited to submit a detailed business case during the tender phase will be issued with a draft Deed of Agreement and requested to complete a statement of compliance against each clause. Where consortia have previously indicated acceptance of a key legal principle during the EOI phase, the Commonwealth does not intend to enter into negotiations to vary these conditions under the Deed of Agreement.

9 Funding

Funding available for Solar Cities projects

Funding available under the $75 million Solar Cities programme will be used to support successful consortia to explore new sustainable models for energy production and use. A small proportion of the total funding has been allocated to assist with the development of detailed business cases by proponents at the tender phase, for monitoring and reporting purposes, and to effectively administer the programme.

No minimum or maximum funding limit has been set for successful Solar City proposals. The level of Australian Government funding awarded to successful proposals will be determined on a case-by-case basis and will depend on the number, scale and quality of proposals. Considerations will include the nature of the proposal and the extent to which the selection criteria have been addressed, the risk involved in the project, and the extent to which the consortium will be able to capture the benefits from the project. Funding will not be allocated if proposals are assessed as not having sufficient merit.

Consortia contributions

The Australian Government is seeking contributions from consortium members or third parties (other than the Australian Government) that:

- constitute not less than 50 per cent of the total eligible project costs; and
- would not have taken place without the Solar Cities programme; and
- directly contribute towards the objectives of the Solar Cities programme.

Contributions may be cash or in-kind. Consortia do not need to have confirmed all of the contributions at the time of the EOI submission. Due to the timing and nature of budget cycles, it is recognised that some organisations contributing to the proposal may not be able to confirm the availability of cash or in-kind contributions at the time consortia are required to submit their EOI proposals. The EOI form therefore provides for proponents to indicate whether contributions are confirmed or indicative. If contributions are classified as indicative, proponents will need to advise when confirmation of contributions can be expected.

Short-listed consortia that are invited to prepare a detailed business case for Solar Cities funding will be required to provide a final and comprehensive budget as part of their detailed business case. Consortia will need to show that they have the ability to cover all costs that would not be met through the payments of grant monies by the Commonwealth. In order to demonstrate capacity to provide leveraged funding, consortia must include in their EOI proposals and detailed business cases an expenditure statement for the project period. Consortia may wish to provide letters of guarantee or evidence of investment capital arrangements to further substantiate claims concerning their capacity to provide leveraged funds. The Australian Greenhouse Office may also seek other relevant information from consortium.

Project budget and eligible costs

Eligible project costs are those which relate directly to activities undertaken in meeting the programme's objectives. All eligible expenditure should be net of Goods and Services Tax. Where there is any doubt as to the eligibility of elements of project costs, applicants are encouraged to discuss this with the Solar Cities Programme Director. Information on the level of financial detail and documentation required is set out in the application form and accompanying notes.

Eligible costs exclude any costs incurred prior to the execution of a Deed of Agreement between the proponent and the Commonwealth. Eligible costs also exclude any costs incurred after the specified completion date of the project (with the exception of audit costs), that is, after 30 June 2013.

Consortia are required to submit a GST-exclusive project budget. When making claims under the Deed of Agreement, successful proponents will need to provide tax invoices in accordance with the requirements set out by the Australian Taxation Office. Project budgets should include an assessment of total project costs and timeframes, the contribution of consortia members, declaration of all other sources of funding for the project (or a similar project) applied for or received, the quantum of Solar Cities funds sought and how they will be expended. Provision should also be made in the budget for an independent audit at the conclusion of the programme.

Consortia should note that if their application for Solar Cities funding is successful, any grant progress payments will be paid in accordance with achievement of milestones and relevant key performance indicators.

Taxation obligations

Solar Cities grants attract the Goods and Services Tax (GST). The Commonwealth will compensate for the level of that tax in making grant payments.

It is recommended that consortium members and lead proponents seek professional advice on their tax obligations.

Financial evaluation

Independent financial viability assessments will be undertaken at both the EOI and tender phases. Consortium members should expect to provide sufficient information and documentation to enable review of their corporate governance, key financial ratios, the project budget and relevant financial statements. Individually, these items provide unique indicators of future viability and are flexible enough to take account of the nature of the organisation. Collectively, they form a set of analytical tools that assess both management and financial strength of consortia in the short and long term.

During the EOI phase the focus of the financial evaluation will include an initial assessment of the viability of the Solar City proposal and the lead proponent of each consortium, given the likelihood that the lead proponent will provide the greatest contribution of funding within the consortium and play a key role in managing the project. The financial evalutation at the EOI phase will also include consortium members contributing more than 30% of eligible contributions. At the tender phase the financial evaluation will include a more detailed assessment of the lead proponent and the financial viability of the project. Information on the level of financial detail and documentation required at the EOI phase is set out in the EOI form and accompanying notes.

10 Forward Process

In September 2004 the Prime Minister announced that Adelaide would be the first Solar City, noting its peak electricity supply problems, a high proportion of sunny days and higher electricity prices for consumers compared to other capital cities. He also foreshadowed that Solar Cities would be located in at least three other urban centres. The selection of the Solar City within Adelaide as well as other Solar Cities will occur through a competitive process to ensure the transparency and fairness of the Solar Cities programme is not compromised.

Solar Cities will be selected through a competitive two-step process. Phase one involves the preparation and assessment of Expressions of Interest (EOIs).

An expert panel will be established to provide recommendations to the Minister for the Environment and Heritage and the Minister for Industry, Tourism and Resources on a suitable short-list of proposals from the EOI phase. Successful consortia will be invited to proceed to the tender phase and will be offered limited financial assistance to help with the preparation of a detailed business case.

The second phase (the tender phase) will involve the preparation of detailed business cases by short-listed consortia. Detailed business cases will be assessed by the expert panel, which will again provide recommendations to relevant Ministers. The tender phase is expected to commence in September 2005, with the successful sites expected to be announced in March 2006.

Implementation, monitoring and reporting, which constitutes the final stage of the process, will occur following the completion of contractual arrangements between the successful consortia and the Commonwealth. It is expected that implementation of the successful Solar Cities will largely be completed by 2008/09. Monitoring and reporting will continue to June 2013.

Stage 1: Expressions of interest (EOIs)

EOIs are to be invited from interested parties in April 2005. As supporting documents to these Guidelines, an EOI form is available, together with accompanying notes for the preparation of EOIs.

The EOI form should be read in conjunction with the accompanying notes, which provide guidance on the level of detail and information required, including attachments such as latest annual report(s), audited financial statements and other supplementary information.

The accompanying notes to the EOI form also outline the EOI lodgement procedure.

The EOI must satisfy each eligibility criterion and should address each of the selection criteria listed in Section 7 of these Guidelines. While recognising that EOIs may be partly conceptual in nature and that consortia membership may not be finalised at the time of EOI development, it is important for proponents to provide sufficiently detailed information to enable the proposal to be effectively communicated for assessment purposes.

EOIs must clearly and concisely:

(a) identify the proposal (ie provide a title);

(b) provide relevant details of consortium members;

(c) describe the project and activities to be undertaken (including location, participants, technologies and measures to be deployed and anticipated outcomes);

(d) set out proposed implementation and management arrangements; and

(e) document the funding structure and sources.

Twelve weeks will be allowed for proponents to develop and submit EOIs. The Australian Greenhouse Office is able to provide guidance to potential proponents in completing an EOI. During the EOI phase, the questions posed by consortia together with the answers provided by the Australian Greenhouse Office will be made publicly available through the Solar Cities web site: www.greenhouse.gov.au/solarcities.

The Australian Government will be conducting stakeholder workshops in major cities to explain the guidelines and key elements of the EOI form and to clarify any aspects of the Solar Cities programme. These workshops will occur in April and May 2005 and will be advertised in relevant newspapers and on the Solar Cities website.

Stage 2: Assessment of expressions of interest

Solar Cities is a relative merit based grants program. An expert panel will assess proposals with the assistance of relevant Australian Government departments, and technical and financial experts as required. The expert panel will assess proposals against the eligibility criteria and, if eligible, will then consider and assess proposals against the core and desirable selection criteria. The Australian Greenhouse Office may request further information from proponents to clarify issues for assessment.

The expert panel will rank proposals and recommend a shortlist to the Ministers for the Environment and Heritage and Industry, Tourism and Resources. The Ministers will take the merit rankings into account and determine which consortia should be short-listed and invited to develop a detailed business case as part of the tender phase.

The number of proposals that will progress to the tender phase will depend on the number and quality of EOIs received.

If a consortium's proposal is unsuccessful at the EOI phase, the Australian Greenhouse Office will notify the consortium in writing.

Stage 3: Preparation of detailed business cases

Around September 2005, consortia that have submitted successful EOIs will be invited to develop their concepts into robust detailed business cases and bid for funding against the specified selection criteria. This will provide the basis for the final determination of sites for the Solar Cities programme. Detailed business cases will elaborate on various aspects of the EOI including the provision of further detail on consortia members' roles and responsibilities, timelines and milestones, and detailed baseline information. Consortia will be required to confirm contributions, both financial and in-kind.

If a consortium's proposal has been short-listed, financial assistance will be available to offset some of the costs associated with preparing a detailed business case, and, where necessary, the legal costs associated with forming a consortium. The financial assistance will be provided through a written offer of assistance, which will include any conditions of the offer. The level of assistance available to each consortium will depend on the number of detailed business cases sought and will be a matter for negotiation between each consortium and the Australian Greenhouse Office. Consortia will be given 14 days from the date of the offer to execute the grant agreement with the Commonwealth for the provision of this financial assistance. Failure to execute a funding agreement in this time may result in the offer being withdrawn.

Twelve weeks will be allowed for proponents to develop and submit detailed business cases. The Australian Greenhouse Office will respond to questions by short-listed proponents during the tender phase. As in the EOI phase, these questions and answers will be made available publicly through the Solar Cities section of the Australian Greenhouse Office website.

A separate application form for the tender phase together with accompanying notes to guide the preparation of detailed business cases will be made available to short-listed consortia. A draft funding agreement will also be made available to successful consortia

Stage 4: Assessment of detailed business cases, announcement of successful Solar Cities

The expert panel, with the assistance of relevant Australian Government departments, and technical and financial experts, as required, will assess and rank the detailed business cases on the basis of the selection criteria and provide recommendations to relevant Ministers for decision. As with the EOI phase, the Australian Greenhouse Office may request further information from proponents to clarify issues for assessment.

Ministers' decisions on which consortia are offered Solar Cities grants and the size and the terms and conditions of those grants will be final.

If a consortium's proposal is unsuccessful at the tender phase, the Australian Greenhouse Office will notify the consortium in writing.

Stage 5: Contract development

The successful consortia will be required to enter into contractual arrangements with the Commonwealth prior to receiving Solar Cities funding. The Solar Cities funding agreement will set out the terms and conditions under which the Commonwealth will provide financial assistance. It will specify agreed deliverables, performance indicators, milestones against which payments will be made, and communication, monitoring, reporting and auditing requirements. The legal principles on which the funding agreement will be based are outlined at Attachment A. No funds will be payable unless and until a funding agreement for a Solar City project has been signed by both parties.

Where an offer is made to a successful consortium following the tender phase, the offer will remain open for a period of sixteen weeks from the date of offer. Within that time, the applicant will be expected to have agreed and signed a funding agreement with the Department of the Environment and Heritage. The offer may be held open beyond sixteen weeks at the discretion of the Programme Director or if the Programme Director believes that the resolution of outstanding issues can be achieved in a reasonable timeframe. There will be no legally binding relationship between the Commonwealth and the consortium proponents in relation to a Solar City project until the parties execute the funding agreement.

Stage 6: Project implementation, monitoring and reporting

Implementation of the Solar City projects will be undertaken in accordance with the funding agreement with each successful consortium. Community engagement and recruitment of households and businesses are expected to commence shortly after the announcement of successful projects. The roll-out of solar and smart meter technologies and energy efficiency and load management measures, including the introduction of cost-reflective pricing, is expected to take around two years to complete.

Effective data collection and monitoring arrangements will be critical to the success of the Solar Cities programme. Relevant data will be collected and analysed in order to inform assessments of the economic and environmental costs and benefits associated with programme interventions in each Solar City. Energy use data will be collected for periods before and during implementation of the Solar City projects and possibly also in a control population.

Each Solar City is expected to provide information on changes to electricity consumption, investment in network augmentation and centralised generation, greenhouse emissions intensity, consumer behaviour, costs to consumers and on the physical operation of the electricity system compared to a business-as-usual base case.

Solar City results will be monitored to June 2013 and compared with appropriate baseline data. Potential impacts of the programme measures on generation, transmission and distribution costs will need to be carefully assessed, providing the first empirical evidence of the magnitude of savings available through the integrated package of measures implemented in the Solar City projects.

As part of their contractual arrangements, Solar City consortia will be required to report regularly and publicly on progress of project implementation. To ensure that there is an effective, consistent, and rigorous process of data measurement, collection, analysis and reporting for all Solar Cities, a monitoring and reporting strategy is being prepared for the programme and a monitoring agent will be engaged to collate, analyse and report on data relating to the programme's performance (e.g. number and capacity of solar technology installations, impact on electricity loads, deferred infrastructure investment, energy savings, and greenhouse gas abatement).

The monitoring and reporting strategy will be developed in consultation with consortia that are short-listed following the EOI phase. Through this consultation process, the data collection methodology will take account of the particular needs and preferences of electricity market participants (e.g. electricity retailers and network service providers). It is anticipated that consortia will provide a range of data to the monitoring agent including data for both participant and control groups. This is expected to include data on energy use (including both electricity and gas consumption and relevant baseline data); households (e.g. physical characteristics such as building envelope, house size, type of hot water and heating/cooling systems, etc); and solar and smart-metering technologies and energy efficiency measures adopted as a result of programme interventions.

The monitoring agent will provide progress reports to the Australian Greenhouse Office that cover the performance of each Solar City and the programme overall. The scope and frequency of these progress reports are matters to be addressed in the development of the monitoring and reporting strategy. In addition, consortia will report directly to the Australian Greenhouse Office as part of their contractual requirements under the funding agreement.

The monitoring and reporting strategy will include a reporting framework that identifies the scope and frequency of reports to be provided by consortia to the Australian Greenhouse Office. It is anticipated that reporting by consortia will be more frequent in the first few years when expenditure is highest during the establishment of the Solar City involving recruitment of programme participants, installation of hardware, etc.

It is intended that the monitoring agent will undertake surveys of participating households and businesses to supplement the information available directly from consortia. Such targeted social research will assess changes in participants' attitudes and behaviours and test the acceptance and perceived performance of the installed technologies and programme measures.

The Australian Government aims to publish aggregated electricity market, financial, and consumer-based information to establish the benefits achieved by the programme and, if successful, to encourage particular programme measures to be duplicated in other areas without the need for government assistance. Appropriate arrangements will be made to protect commercially sensitive information. A communications strategy is being developed to assist with the development of key messages and delivery mechanisms for the various audiences and to put in place appropriate quality assurance and reporting procedures.

An education programme that continues throughout the implementation, monitoring and reporting phases will be an important element of proposals, as it will provide a mechanism to maintain engagement and commitment of participants throughout the Solar City project.

11 Expert Panel and Probity Adviser

An expert panel will be appointed by the Minister for the Environment and Heritage and the Minister for Industry, Tourism and Resources to assess EOIs and detailed business cases during the tender phase. The panel will make recommendations to these Ministers regarding the assessment of the EOI applications and detailed business cases. The panel will possess a range of experiences and skills and will include senior officials from the Australian Greenhouse Office and the Department of Industry, Tourism and Resources

It is important that proposals are investment-ready and viable and that the panel can make judgments regarding the 'business case', with specific expertise relating to solar technologies, energy efficiency and energy market issues to be provided to the panel as required. Proponents may not approach the expert panel in relation to the development of their proposals.

A probity advisor has been appointed for the Solar Cities programme to provide probity advice before and during the selection process and to ensure that all applications are assessed fairly and in accordance with the arrangements set out in these Guidelines.

12 Role of Ministers

The Minister for the Environment and Heritage and the Minister for Industry, Tourism and Resources will decide on which proposals are short-listed at the EOI phase and which consortia will be funded to implement a Solar City. The final decision by Ministers will take account of the requirements of these Programme Guidelines and will be fully documented, including reasons for the decision. In deciding which Solar City projects are funded and what terms and conditions, if any, are attached to the funding offer, Ministers will take account of the advice of the expert panel arising from the assessment process and may take into consideration other matters including the application and related documentation.

13 Solar Cities Enquiries

The person performing the role of Director, Solar Cities, is the initial point of contact for all matters pertaining to development and assessment of the Solar Cities EOI and detailed business case documentation. Consortia must direct all communications through the contact officer, unless otherwise advised:

Write to:

The Director
Solar Cities Team
Australian Greenhouse Office
Department of the Environment and Heritage
GPO Box 787
CANBERRA ACT 2601

Email: solarcities@deh.gov.au

Fax: (02) 6274 1884

14 Glossary

Australian Greenhouse Office is located within the Commonwealth Department of the Environment and Heritage. Any reference to the Australian Greenhouse Office is the same as referring to the Department of the Environment and Heritage.

Consortia are likely to comprise a range of organisations such as state, territory, and local governments; electricity generators, retailers and network service providers; manufacturers, suppliers and installers of relevant technologies; energy management companies; financial institutions; building developers and architects. There are no requirements about who should be involved as long as the objectives of the particular Solar City project are achievable. Consortia may be led by government business enterprises and statutory authorities but not by a state government.

Cost-reflective pricing means the adoption of a suite of innovative tariffs and pricing arrangements that optimise the value of adopting solar and energy efficient technologies and demand management measures. These price signals would better reflect the costs of supplying electricity to a specific customer at a particular time, thereby encouraging more appropriate use of energy. These could include suitable financial or contractual mechanisms that encourage electricity use outside peak periods - for example a flat rate tariff structure with an overlaying incentive scheme to provide the price signal.

Electricity demand management refers to the various options that allow energy consumers to reduce or modify their energy consumption patterns during periods when network or generation capacity is constrained. Demand management strategies include embedded generation, power factor correction through installation of capacitor banks, shifting of electricity demand from peak periods through energy storage, and load control through smart metering or remote, pricing or voluntary means.

Energy efficiency measures include energy-saving technologies and practices as well as technologies that efficiently use energy to deliver particular functions or services. Energy-saving technologies and practices could include products that reduce energy use (e.g. insulation), design strategies that avoid the need for energy consumption (e.g. thermal chimneys), and practices that enhance the performance of other technologies (e.g. automated control systems).

Grid Connected for the purposes of the Solar Cities programme refers to electricity grids that form part of the National Electricity Market, plus the following electricity grids:

State/Territory	Description
Western Australia	South West Interconnected System
Western Australia	North-West (Pilbara)
Northern Territory	Darwin-Katherine
Northern Territory	Alice Springs
Queensland	Mount Isa Region
Tasmania	Main Grid

Load management measures are those that reduce the difference between peak and off-peak demand. Examples of load management measures include peak lopping, load shifting, use of remote controlled appliances and cost-reflective pricing.

Period of the project refers to the period from the signing of a Deed of Agreement by both Parties until 30 June 2013.

Smart meters include interval meters which remotely measure and record electricity consumption every half hour via a telecommunications link, as well as electrical meters and appliance meters.

Solar Cities is the Australian Government programme.

Solar City is a single project within the Australian Government's Solar Cities programme.

Solar City trial refers to element(s) of a project that are being implemented within a Solar City such as responsive electricity pricing arrangements.

Solar technologies include thermal technologies that capture solar energy for use in heat or electricity production such as parabolic concentrators and solar hot water heaters as well as photovoltaic cells that convert light into electricity.

Summary of key legal principles

Purpose

The purpose of this attachment is to:

- give potential proponents a plain English summary of the key principles and issues that they will be expected to agree to if their consortium is successful;
- enable potential consortia members to consider how some or all of these principles should be addressed in the arrangements between consortium members; and
- provide potential proponents with an opportunity to identify issues that may be of concern to them in entering into a legal relationship with the Commonwealth so that the Commonwealth may consider those issues when developing a draft funding agreement.

As part of their Expression of Interest (EOI) form, proponents should:

- indicate their acceptance, partial acceptance or rejection of each of the key principles; and
- where a respondent partially accepts or rejects a principle, the reasons should be outlined along with details of any proposed alternative.

Background

The Australian Greenhouse Office, wishes to make funding available to successful consortia for the conduct of the Solar Cities programme.

This attachment has been prepared to provide interested parties with an indication of the principles that the Commonwealth intends to include in the draft funding agreement for the programme. It does not represent an exhaustive list of those principles. The final form of the draft funding agreement will be included in the subsequent tender phase documentation.

This attachment does not create a binding contractual relationship between the Commonwealth and any interested party and the principles set out here are subject to change at the discretion of the Commonwealth.

A list of definitions of terms used throughout the summary of key legal principles is located at the end of this attachment.

Interested parties should consider seeking independent legal and financial advice (including tax advice) regarding the impact of the following principles on their particular arrangements.

No	Key Principle	Rationale
	Governance Arrangements	
1.	Each Solar City will be governed by a single funding agreement (refer to principle 2).	This ensures that each consortium member is bound by the terms of the funding agreement.
2.	The Commonwealth, the consortium company, (if a special purpose corporate vehicle has been formed) and each of the consortium members will be parties to the funding agreement.	This will legally bind: (a) the lead consortium member/consortium company (if any) to run the consortium and achieve the agreed outcomes; and (b) each consortium member to fulfil its role and responsibilities (such as cash and/or in kind contributions and programme deliverables) as will be set out in the funding agreement; and (c) the Commonwealth to make payments on the achievement of agreed milestones as set out in the funding agreement.
3.	Each consortium will comprise organisations that are committed to fulfilling the objectives of the Solar Cities programme and wish to have a degree of influence in the performance of the project. Provided that the principles 2 and 4 are met, this may be structured as: (a) an organisation that acts as the lead consortium member and subcontracts roles and responsibilities to other members of the consortium; or (b) a special purpose company created for the purpose of undertaking the project which would subcontract roles and responsibilities to members of the consortium[16].	Given the breadth of the Solar Cities programme objectives, it is expected that respondents to the EOI and tender phase will need to join with organisations that have complementary interests, capacities and skills to undertake a Solar City project. The Commonwealth does not have a preference between (a) or (b). That is a matter for each consortium to determine. Each consortium will need to describe its preferred structure in its response to the EOI and short-listed consortia will need to finalise their position during the tender phase.

[16] Note that if a consortium company is formed, all consortium members are expected to be members of that company.

No	Key Principle	Rationale
4.	Each consortium member will be responsible to the Commonwealth for the commitments of another consortium member (i.e. consortium members will be jointly and severally responsible for each others commitments).	The Commonwealth must be assured that the consortium as a group is committed to achieving the objectives and outcomes for that consortium's Solar City. This means that the consortium members must each commit to meeting the contributions that are significant to successfully completing the project. Consortia will need to find a new member to replace a withdrawing member, unless the Commonwealth agrees that the roles, responsibilities and contributions of the withdrawing member can be fulfilled by the remaining consortium members.
5.	The consortium company (if any) and each of the consortium members will also be party to a consortium agreement governing the operation of, and roles and responsibilities within, the consortium.	This assures the Commonwealth that the commitments agreed by consortium members under the funding agreement will be implemented. Such a consortium agreement will reflect that the consortium members have thought through the rights and obligations required for the successful conduct of the project.
6.	The consortium members will be required to comply with their obligations under the consortium agreement.	Ensures consistency between the obligations under funding and consortium agreements, which, together operate to regulate the conduct of the consortium. Solar City payments will be made on achievement of specific milestones.
	Timeframe	
7.	The term of the funding agreement is expected to be about eight years, from 2006 to June 2013.	The Commonwealth expects this period will be necessary for establishing, monitoring, analysing and reporting on each Solar City. It is expected that by 2008 – 2009 each Solar City will be largely implemented, with monitoring and reporting occurring through to June 2013.
8.	The consortium must take reasonable steps to minimise delay during the Solar City project and must immediately notify the Commonwealth if it becomes aware that there will be a delay. In response to a material delay the Commonwealth may elect to grant an extension, reduce the scope of the project, or terminate the funding agreement, according to its seriousness.	Allows delays to be identified and addressed and seeks to ensure milestone delivery in accordance with the project timetable.
	Programme Objectives	
9.	Consortium members will be required to commit to using their best endeavours to achieve the programme objectives.	Ensures that the consortium member's behaviour in conducting the project is consistent with achieving the broader programme objectives.
10.	The consortium members will carry out the Solar City project in accordance with the milestones and key performance indicators set out in a schedule to the funding agreement	The milestones and key performance indicators operate as a mechanism to measure the consortium's performance under the funding agreement. They will be linked to the payment of the Commonwealth funds. The schedule will be largely based on the details of the consortium's proposal, subject to any modification agreed between the parties. Further information about the likely content will be available to short-listed consortia at the tender phase.
11.	The performance of the Solar City should be facilitated by inclusion in the funding agreement of incentives and disincentives for the consortium. The detail of such measures would be something addressed at the tender phase.	To create an environment that will facilitate achievement of the objectives and reduce the risk of breach of the funding agreement. Consortia will be encouraged to identify incentives and disincentives appropriate to their circumstances and membership.

No	Key Principle	Rationale
	Commonwealth Funding	
12.	Commonwealth funding will be paid to: (a) the consortium company if such a company is established; or (b) the lead consortium member if a consortium member is fulfilling that role. (c) the consortium member that has agreed to act as agent for the other consortium members to fulfil administrative functions.	A specific entity will need to fulfil the administrative role of handling the Commonwealth funding in an accountable and transparent manner.
13.	The Commonwealth funds must be paid into a nominated bank account established by the relevant party, identified in principle 12 for the purpose and must be held separately from funds unrelated to the Solar City project.	Ensures that Commonwealth funds can be accounted for.
14.	Commonwealth funds are to be paid in instalments and payment will be made if the Consortium has successfully: (a) achieved the milestones and key performance indicators relevant to the instalment; and (b) complied with all other obligations under the funding agreement (such as financial reporting or submission of invoices) that are due to be fulfilled prior to payment of the instalment.	Ensures that payment of Commonwealth funds will be accountable and transparent.
15.	The Commonwealth will be able to suspend payment of the Commonwealth funds or an instalment of those funds if the consortium members do not meet their obligations under the funding agreement.	Ensures the proper use and management of public funds.
	Contributions from Consortium Members	
16.	Consortium members will make contributions (whether from their own resources and/or from parties other than the Commonwealth) towards the conduct of the project. Such contributions may be: (a) cash; or (b) in-kind and will be specified, for each consortium member or third party, in a schedule to the funding agreement.	The Australian Government is seeking 50 per cent leverage of total project costs associated with each Solar City. These contributions may be in cash or in-kind.
17.	The contributions by consortium members must be in accordance with the budget set out in the funding agreement.	Ensures consortium members are committed to provide their specific contributions.
18.	The consortium members must pay their cash contributions to the organisation that is fulfilling the administrative role for the consortium (see principle 13).	Ensures it is administratively efficient to identify contributions of a consortium member.
19.	The consortium must notify the Commonwealth immediately if the consortium members do not make their contributions (cash or in-kind) or meet the milestones in accordance with the funding agreement.	Ensures that the Commonwealth is made aware of any failure of consortium members to provide their contributions and is able to address the situation early.
20.	If a consortium member fails to make its contributions in accordance with the funding agreement or meet a milestone, the Commonwealth can choose to do one or more of: (a) postpone payment of the Commonwealth funds until the outstanding contributions are received or the milestone has been achieved; (b) reduce the Commonwealth funding by an amount equal to the proportion of reduction of the consortium member contributions; (c) in the case of serious failure, terminate the funding.	The failure of consortium members to provide their contributions could have serious consequences for the conduct of the Solar City project. This range of options, varying in their severity, enables the Commonwealth to select the most appropriate response to address the breach and safeguard the public money and objectives of the Solar Cities programme.

No	Key Principle	Rationale
	Management and use of Commonwealth Funding	
21.	The consortium company / lead consortium member will be responsible for the management /allocation of Commonwealth funds once paid by the Commonwealth.	Facilitates accountability and transparency for the application of the Commonwealth funds.
22.	Commonwealth funds may only be spent: (a) for the purposes of undertaking the Solar City project; and (b) in accordance with the budget for the project. Only limited variation to the budget will be permitted without obtaining the prior approval of the Commonwealth. Consortia may make a transfer of funds between expenditure items up to an agreed limit.	Ensures that the Commonwealth funds are applied for the purposes approved by the Commonwealth. Allows a degree of flexibility to facilitate efficient running of the project.
23.	Any unspent Commonwealth funds (including any interest on those funds) must be repaid to the Commonwealth upon expiry or termination of the funding agreement.	Ensures the proper use of Commonwealth resources and the recovery of unused Commonwealth funds.
24.	Any Commonwealth funds that have been allocated by parties to the funding agreement, other than in accordance with the funding agreement, will be treated as a debt due to the Commonwealth and must be repaid.	Ensures the recovery of any misused Commonwealth funds and ensures the proper use of Commonwealth resources.
25.	Assets that are purchased in whole or in part with Commonwealth funds will be owned and maintained by the consortium member that purchases that asset (which may be the lead consortium member or the consortium company).[17] Assets must only be used for a purpose consistent with the programme objectives, and must be recorded in a register of assets.	Ensures that assets purchased using Commonwealth funds are dealt with in an appropriate manner approved by the Commonwealth.
	Access to Data, Premises and Records	
26.	The consortium members will maintain and retain complete, accurate and separate books, records and financial statements detailing: (a) the work carried out under the funding agreement; (b) the deposit and expenditure of Commonwealth funds; and (c) the receipt and use of contributions from consortium members.	Ensures that adequate details are retained to enable auditing of the use of Commonwealth funds and consortium member contributions made to the project.
27.	The Commonwealth will require reasonable access, from time to time, to audit and review the conduct of the Solar City project.	Allows the Commonwealth to properly audit the performance of the project and the expenditure of funds under the funding agreement. The clauses in the funding agreement will enable the Auditor-General and Privacy Commissioner to perform their legislative functions.
28.	The consortium members must cooperate with any other party contracted by the Commonwealth to contribute to, publicise or monitor the progress of, the project or Solar Cities programme.	Enables the Commonwealth to confirm and publicise the progress of the Solar City project.
	Monitoring and Reporting	
29.	The consortium will be periodically required to provide all relevant details and data in order for the Solar Cities monitoring agent to prepare regular reports.	Enables the Commonwealth to evaluate the performance and progress of the project. The monitoring agent will liaise with consortia in this regard.
30.	The consortium will be periodically required to prepare and provide to the Commonwealth reports, including budget and financial reports, on the consortium's performance under the funding agreement.	Enables the Commonwealth to evaluate the performance and progress of the project and to make comparisons between Solar City consortia.

[17] Note: By placing the obligation to own/maintain assets on consortium members, the consortium members may then pass on to subcontractors or third parties, if they wish, the ownership rights/obligation to maintain the assets.

No	Key Principle	Rationale
31.	The Commonwealth will undertake an interim review of the programme in 2008-2009 and a final review before June 2013, at which times consortium members will be required to contribute information and constructively participate in the reviews.	Enables an assessment of the performance of the programme.
	Commonwealth Material	
32.	Any material (including for example, documents, equipment, information and data) that the Commonwealth provides to the consortium for the purpose of undertaking the project will continue to be owned by the Commonwealth. The consortium members must return that material following termination or expiration of the agreement (or when a consortium member ceases to be a party to the funding agreement).	Makes it clear that ownership of Commonwealth material is not transferred under the agreement and ensures that any such material owned by the Commonwealth is properly returned to it.
	Intellectual Property (IP)	
33.	The intellectual property rights in any material created for the purposes of the funding agreement or the project ('Project IP') will be owned in the manner determined by the consortium. The Commonwealth will not seek ownership of such IP.	Creates certainty regarding ownership of project IP.
34.	Irrespective of the arrangements agreed by consortium members for ownership of the 'Project IP', the consortium company/ consortium members must have a right to use the project IP for the purpose of performing obligations under the funding agreement.	Ensures that project IP will be available for use in conducting the Solar City project.
35.	The Commonwealth will have a perpetual non-exclusive right to use, reproduce and adapt the project IP for the purposes of administering and promoting the Solar Cities programme.	Ensures the Commonwealth is able to make use of the material produced as a result of the Solar Cities programme such as reports etc. but only for a limited purpose.
	Utilisation of Project IP	
36.	Consortium members will be required to use their best endeavours to use or apply any project IP so as to maximise the national benefits accruing to Australia, including the Australian environment. This may include the replication of Solar City type projects in other parts of Australia. Use and exploitation of project IP must be consistent with the programme objectives.	Facilitates the application of project IP for national benefit.
37.	If the project IP is not applied within a specified time period (to be agreed in the tender phase stage), the consortium may be required by the Commonwealth to transfer that project IP to the Commonwealth, another consortia or such other third person as nominated by the Commonwealth.	Prevents the project IP being locked up by consortium members.
	Acknowledgment and Promotion	
38.	Consortium members will cooperate with the Commonwealth in the promotion of the Solar Cities programme. Details of the cooperation required will be provided at the tender phase stage.	Ensures effective promotion and the raising public awareness of the programme.
39.	The consortium members will use their best endeavours to ensure that all publications, promotional or advertising materials, or any public announcements or statements, related to the Solar City, acknowledge the contribution of the Commonwealth and refer to the Solar Cities programme. The Commonwealth will specify the required form of acknowledgment in the funding agreement.	Creates certainty regarding when and in what form the consortium members are required to acknowledge the Commonwealth's role in the programme.
40.	While the funding agreement continues the consortium members will be able to promote their involvement in the Solar Cities Programme by using one of the forms of promotional statements specified in the funding agreement.	Gives consortium members' rights to promote their association with the Solar Cities programme.

No	Key Principle	Rationale
41.	The Commonwealth reserves the right to examine samples of the consortium member's publications and promotional material. The Commonwealth may reasonably withdraw its approval for use of any statement or logo indicating a connection with the programme where that use would adversely impact on the reputation of the Commonwealth or the Solar Cities programme.	Enabling the Commonwealth to protect its reputation and the reputation of the programme.
	Confidentiality	
42.	All parties to the funding agreement will be subject to standard obligations to maintain the confidentiality of any confidential information provided by another party. For example, obligations: (a) not to disclose such information unless permitted to do so in writing; (b) to require advisers or a third party to give a written undertaking regarding the protection of confidential information; and (c) to notify any third party receiving that information that it is confidential in nature.	Provides protection for information of a confidential nature that is provided by a party under the funding agreement.
	Privacy	
43.	All parties to the funding agreement will be subject to standard obligations, with respect to the protection of the privacy of individuals' personal information. For example, obligations to: (a) only use and disclose personal information for the purpose of meeting responsibilities under the funding agreement and not for direct marketing etc; (b) protect personal information against loss, unauthorised use, disclosure etc; (c) comply with the information privacy principles; and cooperate and comply with requirements of the Commonwealth Privacy Commissioner.	Imposes privacy obligations consistent with requirements under the *Privacy Act 1988*
	Project Variations	
44.	A party to the funding agreement may seek an amendment to the scope of the project activities by following the project variation process set out in the funding agreement. This requires the interested party to submit a project variation proposal in the specified form. The proposal will be considered by the other parties of the consortium and if accepted by the Commonwealth will operate to vary the scope of the project activities.	Inclusion of a project variation mechanism provides for a level of flexibility in the funding agreement and to assist with the management of the funding agreement.
45.	The lead consortium member or consortium company will act as agent of the other consortium members for the purpose of negotiating and executing variations to the funding agreement on behalf of the consortium.	Increases efficiency by removing the need for all consortium members to execute deed of variation to the funding agreement.
46.	Any change to the membership of a consortium must be approved by the Commonwealth and documented through a formal variation to the funding agreement and the consortium agreement.	Enables the Commonwealth to manage its legal relationships and monitor achievement of outcomes.
	Termination	
47.	The Commonwealth may terminate the funding agreement or reduce the scope of the programme at any time.	Allows the agreement to be terminated in circumstances where that becomes necessary, for example, where the Commonwealth funds can no longer be made available for the project or the Commonwealth Government has a change of policy.
48.	The Commonwealth can terminate the funding agreement for: (a) default by the consortium (including the consortium members) of their materially important obligations (which will be identified in the formal funding agreement to be included with the tender phase); and (b) other reasons which will be identified in the draft funding agreement to be included with the tender phase documentation.	Ensures a mechanism for ending the funding agreement in circumstances where the actions of consortium member(s) mean it is no longer capable of being properly performed.

No	Key Principle	Rationale
49.	In the event of termination the overall Commonwealth funds provided will be adjusted accordingly. The Commonwealth will at most make payments due up to the date of termination and (in the event of termination for convenience by the Commonwealth) for reasonable costs incurred as a direct result of termination.	Ensures that Commonwealth funds will be provided for the period of the Funding agreement and that payment of Commonwealth funds will be accountable and transparent.
	Effect of Expiration / Termination	
50.	The consortium must do all things reasonably required by the Commonwealth to ensure orderly winding up of the consortium. This may include, for example, the development of a 'winding-up plan'.	Ensures orderly winding-up of a consortium. This is particularly important given the involvement of end-user electricity consumers in the project. Potential adverse consequences for such consumers must be minimised.
	Indemnity and Insurance	
51.	The consortium members will be required to indemnify the Commonwealth (and its officers, employees and agents) against losses and liabilities arising from matters or risks that the consortium members are in the better position to manage or minimise (such as breach of the funding agreement, negligence and infringement of third party IP rights). The consortium member's liability to indemnify the Commonwealth will be reduced proportionally to the extent that any fault on the Commonwealth's part contributed to the relevant loss, damage expense or liability.	Sets out the allocation of risk for conduct of the programme. Given that the consortium members will conduct the project, they are best placed to minimise the potential risk.
52.	The consortium company and consortium members must maintain insurance policies adequate to cover their potential liability under the funding agreement. The nature of the insurance, for example workers compensation, professional indemnity and public liability, will be identified in the draft funding agreement to be included in the tender phase documentation.	To ensure that consortium member's have insurance capable of covering (as far as possible) their potential liability under the funding agreement
	Conflicts of Interest	
53.	Each consortium member must disclose any actual or potential interest that might conflict with the ability of the consortium member to carry out its role in the project. A consortium member must notify the Commonwealth of steps it will take to remedy any conflict of interest. If those steps are inadequate the Commonwealth may direct the consortium member to resolve the conflict in the manner proposed by Commonwealth.	Identifies consortium members that may act in a manner that is inconsistent with the achievement of the goals set for the consortium.
	Subcontracting and Assignment	
54.	The consortium company and consortium members must not assign or subcontract any substantial part of their obligations without prior written approval of the Commonwealth.	Ensures that only parties, which meet with Commonwealth approval, are involved in conducting the project.
55.	Consortium members are required to ensure their contracts with their contractors, employees and agents etc engaged in the project reflect the provisions of the funding agreement	Ensures the party contracting with the Commonwealth can fulfil its obligations in order to achieve the programme objectives.
	Dispute Resolution	
56.	Parties will be required to attempt to settle any dispute under the funding agreement by negotiation and mediation before commencing court proceedings or arbitration.	Ensures the parties have every possible opportunity to settle a dispute before having to enter litigation and incur the associated cost and inconvenience
	Applicable Law	
57.	The funding agreement will be governed by the law of the Australian Capital Territory.	Clarifies the law that will apply.

Definitions

The following definitions are used in Attachment A:

Assets	Assets that are purchased in whole or in part with Commonwealth funds
Commonwealth Funds	The funds provided to the consortia by the Commonwealth of Australia through the Solar Cities programme.
Consortium	The organisation(s) selected by the Commonwealth to conduct a Solar Cities project as part of the programme.
Consortium Agreement	The agreement between consortium members governing the operation of the particular Consortium by the consortium members.
Consortium Company	An incorporated body formed for the purpose of managing the Consortium. Note that if a consortium company is formed, all consortium members are expected to be members of that company.
Consortium Member	A member of a Solar Cities consortium.
Contributions	Cash or in-kind contributions made to the consortium by the consortium members, whether from their own resources or from a party other than the Commonwealth.
Funding Agreement	The agreement under which the funds are provided by the Commonwealth to a consortium for the purpose of the programme and which is expected to be based on these key principles.
Participant	An organisation or individual that is involved in the Solar City project but not as a consortium member.
Programme	The Australian Government's Solar Cities initiative.
Programme Objectives	To: (a) demonstrate the economic and environmental impacts of integrating cost-reflective pricing with the concentrated uptake of solar, energy efficiency and smart metering technologies; and (b) identify and implement options for addressing barriers to distributed solar generation, energy efficiency and load management for grid connected urban areas.
Project	The Solar City project to be conducted by a consortium.
Sub-contractor	An organisation or individual which contracts to provide goods or services to a Solar City consortium member or the consortium company for the purpose of performing its obligations under the funding agreement.