SEMREP for Business

Options Paper

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Contents

Introduction

SECCCA and SEM Councils undertook a feasibility study into a 'South East Melbourne Renewable Energy Project'. This sought to identify the feasibility of delivering a corporate Power Purchasing Agreement (PPA) to supply Councils with electricity, either supplied from renewable energy sources in the South East Melbourne Region, or sourced from outside the region but delivering socio-and economic benefits in other forms.

As part of the feasibility study, Councils sought to identify whether the model could also deliver renewable energy and emissions reduction benefits to businesses electricity customers and electricity users in the broader community.

It was identified that a procurement model for Councils should primarily meet the needs of Councils and, if possible, be adapted to deliver electricity products to other customers at a later time.

Ultimately, it was identified that there was insufficient commitment of electricity demand among Councils to underpin the development of a SEMREP PPA.

This Option Paper identifies alternative models whereby Councils may be able to deliver renewable energy supply to residential and business customers. Four broad models have been identified however there remains some opportunity for variability within each to deliver flexibility to each Councils' needs.

Model 1: Council promoted retail renewable electricity product

Target Audience	Residential and SME Customers
Role for Local Government	• Selection/vetting of renewable energy product/supplier • Promotion of renewable energy retail product to residential and SME customers
Resources required	Administration of procurement/selection process Marketing and communications Relationship management with preferred suppliers.

Description

This model relies on Councils using its role as a trusted source of information to promote a renewable energy retail product to residential and Small to Medium Enterprise (SME) consumers in the region. Through the procurement process, Council/s would select one or multiple suppliers which will deliver local socio-economic benefits to the region either in the form of sourcing electricity from local renewable energy projects or through other means such as local job creation, sponsorships, training, or energy efficiency upgrades. The procurement process would also evaluate suppliers to mitigate the risk of poor customer service standards, business practices, reputational risk, etc. The procurement process could require the preferred supplier to provide Councils with anonymised and aggregated data (such as aggregate volumes of electricity consumed, amount of carbon emissions abated, socio economic benefits delivered) in exchange for Councils promoting the renewable energy product as a preferred product.

This model was adopted by the City of Darebin on behalf of NAGA Councils in the early 2000s and ran for approximately 5-7 years. Several thousand customers took up the offers. Key challenges involved active supplier management, ensuring that suppliers met service standards, and resolving disputes between customers and electricity retailers.

Resources required

Resources predominantly involve staff time to undertake:

- project management,
- deliver a procurement/selection process,
- marketing and communications
- relationship management with preferred suppliers.

Pros and Cons

Benefits:

- Can catalyse retailers to develop renewable energy products aimed at community benefits/ and/or sourcing from local generation
- Increases uptake of renewable energy in the community
- For the purposes of carbon accounting, can provide Councils with a data source regarding renewable energy uptake in the community
- Provides a 'good news' story to drive awareness and action on renewable energy initiatives.

Disbenefits and risks:

- Requires considerable marketing effort from Councils in an already crowded electricity retail market
- Experience from Darebin community GreenPower initiative (~12 years ago) suggests that Councils become intermediary for settling customer service disputes with retailers; requires significant stakeholder management
- Requires a robust procurement/ supplier selection process
- This approach carries some reputational and administrative risk to Council. Council may risk being associated with:
    - any negative impacts or disbenefits associated with the renewable energy project
    - any poor customer service experiences

Implementation Pathway

- Project Plan and internal agreement to proceed
- Build alliances with other Councils
- Agree on preferred nature of relationship with retailer (benefits and data to be provided to Councils, Scope of Council's promotional involvement)
- Design procurement process
    - Determine criteria for selection, including co-benefits, customer service standards, dispute resolution, reporting, etc.
- Preliminary design of marketing and promotion approach
- Implement procurement process
- Negotiate with retailer and co-design product offering and marketing approach
- Implementation, evaluation, ongoing relationship management.

Model 2: Council facilitated group PPA

Target Audience	Large corporate customers/ Large SMEs with annual demand exceeding ~5GWh/year.
Role for Local Government	Facilitate a PPA Purchasing group OR Promote participation in a purchasing group led by another organisation.
Resources required	Staff time: Project management; procurement expertise, communications. Consultants: legal advice, energy market modelling,

Description

Renewable Energy Corporate Power Purchase Agreements (PPAs) are emerging as an energy procurement solution for large corporate customers. These contracts are able to deliver energy cost management strategies while also delivering emissions reductions and corporate reputational benefits. Due to the transaction costs and knowledge base required, customers with electricity demand below 50GWh/year do not consider PPA solutions as viable options. Participation in procurement groups enables customers with smaller loads (~5GWh - ~80GWh) to participate in these types of contracts. A relatively small number of purchasing groups have been facilitated to date and there remains a gap in the market. Participating in a purchasing group also enables customers to gain knowledge and experience from other organisations rather than having to navigate PPAs on their own.

Previous purchasing groups have been undertaken by:

- South Australian Chamber of Mines and Energy (SACOME)
- Telstra
- City of Melbourne
- South Sydney Regional Organisation of Councils (SSROC)

This option involves *either*:

- A lead Council or Councils (or SECCCA) taking on the role of facilitator of a purchasing group,

OR

- Identifying and helping to catalyse relationships between corporate buyers, and a third-party facilitator or a purchasing group (eg. South East Melbourne Manufacturing Alliance - SEMMA, Procurement Australia, a commercial energy advisory firm etc.)

The procurement process could:

- specifically focus on delivering a renewable energy project in the South East of Melbourne, or deliver socio-economic benefits to South East Melbourne, or
- remain agnostic about the location of the power plant but focus on energy cost savings and increased renewable energy purchasing in the region.

The second option is more likely and would deliver a more competitive tendering process by not limiting the potential participants in the tender process.

Resources required

Facilitating a procurement group requires considerable staff time and specialist knowledge. Advice from specialist consultants will be required to provide legal and energy market advice. By its nature, facilitating a procurement group requires skilled relationship management, process management, and imparting market knowledge and procurement process information to the group.

It may be possible to recoup some or all of the costs of administering the procurement process from participating customers. Nevertheless, the costs associated with staff time, specialist advice, and administering a tender are expected to be in the range of $500,000+ .

Pros and Cons

Benefits:

- This approach overcomes an existing gap in the market. There are currently few aggregators of PPA purchasing groups. The initiative would enable customers with annual loads below 50GWh (but above ~5GWh) to engage in corporate PPAs
- Would deliver emissions reductions to the region and enable customers to adopt PPAs as an energy cost management strategy.

Disbenefits and risks:

- Requires considerable resourcing commitment from SECCCA Councils. The City of Melbourne's *MREP II* initiative has demonstrated that the costs associated with running the initiative can be recouped from corporate participants
- There is a steep learning curve involved in managing this type of project, particularly concerning PPA market knowledge, but also contract structuring and managing group procurement processes
- Requiring tender responses to be located in the South East of Melbourne or to deliver benefits to the South East of Melbourne would limit the number of responses and may be seen by corporate customers to compromise the competitiveness of the process.

Implementation Pathway

- Identify lead Council or organization (potentially SEMMA or similar)
- Gauge support from corporate customers to identify whether there is critical mass
- Develop project team and project plan (Business Renewables Centre-Australia resources are designed to assist with this)
- Understand customer drivers and objectives,
- Understand electricity loads to be incorporated into the tender process
- Form purchasing group, including group governance and participant obligations
- Provide energy market advice (if considered necessary)
- Agree on procurement criteria
- Engage legal and energy market advisors to develop tender specification and evaluation criteria
- Design procurement approach, engage procurement agent if required
- Undertake procurement process; evaluation, negotiation and contracting
- Contract award and implementation.

Model 3: Council Facilitated Renewable Power Plant – With retail off-take agreement

Target Audience	Residential, SME (Residential customers as a secondary target audience)
Role for Local Government	Develop solar farm Select retail off-taker Promote retail product as per Model 1
Resources required	Business case development Design and Planning (Engineering etc) Procurement Project management Retailer relationship management Marketing and promotion as per Model 1

Description

This model involves Councils developing a medium-scale power plant (such as a solar farm, or a landfill methane plant) and partnering with a retailer to sell the electricity to residential and small commercial customers.

The project involves two elements, both considerably complex. The first involves the development of a renewable energy asset, such as a solar farm. This type of project has been undertaken by the City of Newcastle and the Sunshine Coast Regional Council, as well as the University of Queensland and others. Councils in Victoria have for several years leased the rights to develop and operate landfill methane power plants at Council owned landfill facilities. Nevertheless, this phase requires considerable specialist knowledge an expertise and involves project development risk.

The second phase involves selecting a suitable retail partner to purchase the electricity and on-sell to commercial customers. This phase would involve agreement on marketing strategies, project aims and objectives, and agreement between Council and the retailer on delivery of co-benefits.

Sale of electricity to residential customers may also be possible, however the relatively small demand of residential customers and high volumes of turn-over may present challenges in securing sufficient customer demand to underpin an offtake agreement. Further investigation of this option would be required through discussions with retailers.

Resources required

Council staff and consultants:

- Renewable project design and delivery
- Retailer procurement, contracting
- Marketing and communications.

Pros and Cons

Benefits:

- Strong and compelling 'local power plant' story
- Potentially identifies off-takers for Council owned solar farm projects
- Emissions reduction and local economic development benefits.

Disbenefits and risks:

- Considerable lead time (2-5 years)
- Project development risks and cost uncertainties
- Requirement for available Council land
- Requirement to select retailer to retail (on-sell) electricity generated
    - Risk of not identifying suitable off-taker/retailer
- Councils would be competing to sell electricity products in a crowded market.

Implementation Pathway

Implementation pathway depends on identifying suitable solar farm or other generation projects (such as landfill methane to energy). There are several projects in various stages of development in the region.

A detailed project plan would be required. The steps below provide a high-level concept of likely project steps. The actual sequencing may differ.

Process steps:

- Project planning
- Site selection and site feasibility
- Business case development
- Development of business model - selecting project partners (retailers)
- Technical design, planning approvals, network connection approvals, power plant procurement and delivery
- Selection of retail partner,
    - Off-take agreement contracting
    - Design and agreement of customer recruitment strategy
- Promotion and recruitment of electricity customers
- Ongoing management of business model and commercial relationships.

Model 4: Microgrid, peer to peer trading or virtual power plant.

Target Audience	Small commercial and retail consumers
Role for Local Government	Project development, partner and customer recruitment, promotion and marketing.
Resources required	Considerable staff time and development costs. Likely legal and market advice. Possibly technical advice.

Description

Microgrids, Virtual Power Plants (VPPs) or Peer-to-peer trading solutions are emerging models which utilise a distributed network of generation technologies (such as rooftop solar panels) and sometimes batteries, to enable the management of electricity generation and consumption across a population of consumers. These models generally utilise the existing electricity grid (although in the case of microgrids this may not always be the case) and rely on accounting for power exported or imported by customers and enabling the balance to the traded.

While not yet broadly adopted, several of these models have been piloted and implemented to a limited extent. Commercial providers have developed and offer part or complete solutions that enable the implementation of such models. Such providers include Energy Locals, Alume and GreenSync. Pilots have also been undertaken by network operators (including Ausnet and United Energy).

This option involves Council/s partnering with existing solution providers to develop business models which would enable rooftop and other generation assets to trade electricity with other local customers in the grid. These generators and customers could include households, SMEs, institutions (such as schools) and Council buildings. A key challenge is that the current regulatory and market environments (and primarily the imposition of network charges) do not enable commercially viable energy trading between customers in the grid. The applicability of these models to large energy customers (e.g. large manufacturing plants, large institutions such as universities, etc) has not been tested but may be limited. This is due to the likely significant discrepancy between the volumes of energy generated/exported and consumed by larger customers, and the discrepancy in tariffs paid by smaller and larger tariffs. Further investigation is required.

Resources required

- Project development staff:
  - Development of commercial and technical models
  - Communications and marketing
- Legal advice
- Probity and procurement

Pros and Cons

Benefits:

- Provides a compelling 'local energy' story.
- Provides local emissions reductions
- Enables greater uptake of renewable energy
- Local economic and social benefits
- Demonstrates leadership.

Disbenefits and risks:

- Relatively few VPP, microgrid and peer-to-peer trading solutions have been successfully piloted
- Considerable project development resources required
- Significant regulatory and commercial barriers currently prevent this approach form achieving commercial viability
- Some likelihood that the initiative would fail to deliver a viable model to the community.

Implementation Pathway

- Project scoping, selection of likely model
- Initial pre-feasibility study
- Selection of project partners
- Develop business models, implementation plans.

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<table>
<tr><td>Residential customers</td><td>Small and Medium Enterprises (Annual electricity demand below 5GWh)</td><td>Medium – large businesses. Annual electricity demand over 5GWh)</td><td>Large corporate customers, manufacturing, institutions.</td></tr>
<tr><td colspan="2">Model 1: Council promoted retail renewable electricity product</td><td></td><td></td></tr>
<tr><td></td><td></td><td colspan="2">Model 2: Council facilitated PPA</td></tr>
<tr><td colspan="3">Model 3 - Council Power Plant with Retail partnership</td><td></td></tr>
<tr><td colspan="3">Model 4 – Microgrid, Peer-to-peer trading, VPP</td><td></td></tr>
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Overview of applicability of each model to market segments