

Community Frequently Asked Questions

	Questions	Answers
1	How big will the plant be?	Approximately 3Ha in size - 175 x 175 metres land area. As the proposed site is located well away from the nearest main road the height of any structures will be well screened both by slope and vegetation.
2	How much noise will it make?	All items of plant and equipment will be insulated and treated so that they do not exceed the permitted levels at the nearest sensitive receiver. For night time this means less than 40 dBA. EPA permits can not be obtained if the plant is louder than this. EPA permits are based on noise at maximum theoretical output.
3	Is it going to be dusty?	All dust particles from woodchip drying are captured first by a cyclone - like a stainless steel vacuum cleaner, then the exhaust is passed through Nomex (bags which capture any very fine dust). The air coming out of the dryer is likely to be less dusty than a hot wind on a dry day.
4	What about smells?	The only possible source of smell will be the wood chip drying process, with some eucalypt or pine type aromas. This is known not to be a concern at other sites using the Torbed cyclonic driers, but will be validated during the fully detailed feasibility study.
5	What about emissions – smoke, noxious gases?	As the plant converts the wood into synthetic gas, there is no way for smoke to come out. Smoke is tiny particles of unburnt carbon or ash, any unburnt carbon in the syngas is captured as biochar. The syngas is a clear, colourless gas which is then burnt in a huge excess of air, so that there is no smoke or ash. All the elements in the syngas are burnt, so only water and carbon dioxide come out from the exhaust.
6	Surely burning trees releases lots of carbon back into the air?	Yes and the growing trees absorb (throughout their life) what is released when the tree is burnt so the fuel is considered sustainable. The use of the trees for fuel also means that we are not consuming power produced by oil or gas-powered generators.
7	Are there enough trees for this?	Yes. KIPT have between 450-500,000 green metric tonnes (GMT) of trees to harvest annually for the first 10-12 years. They plan to replant pine with blue gum eucalypt and coppice the existing blue gum so that they can take a second crop from these trees which will yield around 3-350,000 GMT annually for years 13-20. New plantings after this third crop will then boost tonnages again.
8	This is risky – why are we doing it?	Saving the Community between \$0.8-\$1.1M annually for the life of the project in power bills is a good reason ,as is the generation of \$1.5-\$3M annually in post-tax dividend to participating partners. Any investment is a risk, however, we are working with off the shelf technology that is robust, reliable and well-understood, supplying power into a well-established market at a competitive prices and we have a lot of timber resource that can be accessed on long-term fuel supply contracts – with the right partners this has every opportunity to work. The project also creates employment, and will spend money in the local economy.
9	Where has this been done before?	Syngas is made from biomass in many places in the world. The technology we have modelled the plant on is in use at Usk (Wales) and in Poland, and the supplier has other projects operating similarly in Vietnam and Cambodia. Combined cycle gas turbine plants are common - Pelican Point in SA is one, there are many thousands around the world. They usually run on natural gas, but the manufacturer GE state that they can run on a wide variety of fuel from diesel and liquefied petroleum gas (LPG) to low heating values fuels such as syngas and blast furnace exhausts.
10	Who's paying for it?	It is anticipated that there will be a minimum of 2 key equity partners (which may / may not involve Council - no decision has needed to be made as yet) who will then leverage Australian Government Renewable Energy Grants and debt to build the plant. There are various funding mechanisms / sources available for debt - from "friendly" providers such as the Clean Energy Finance Corporation to commercial lenders. The full feasibility study will understand thoroughly what the financing options will be.
11	The ratepayers will be saddled with a big debt – we shouldn't be doing this	Right now no determination has been made that Council will play a direct investment role in this project - it will only make this decision once the detailed feasibility work is completed. The business structure is designed to protect project partners from any liability greater than that of their basic investment.
12	We don't have the expertise to do this.	True, nevertheless there is the expertise out there to do this and it will be vital to create the right partnerships and have a professional skills-based board of management for the business that can ensure that the business is run properly.

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13	Why are we doing this - we are getting a new power cable anyway?	We are doing this because we see a way of reducing power bills to this Community by between \$0.8-\$1.1M annually whilst generating a dividend to project partners of between \$1.5-3M annually which we hope will stay within our Community. We need the new power cable to sell power into the mainland market when the price is right to do so. This is what generates the profit - when the price is not great we will focus on supplying power to the island only.
14	Are there other benefits to our community	The plant will pay out around \$5M per annum for woodchip supply, much of that money will go to pay for the labour and services required to bring the chip to the plant. The plant will also employ eight to ten people directly, adding around \$1.2M per annum to the local economy. That money will be created by off island power sales.
15	Why does Council need to share the benefits with EEA	EEA brings skills and key industry connection, who bring yet more skill and experience. EEA can satisfy authorities such as SA Power Networks that what they propose makes technical and regulatory sense. EEA has done much of the hard technical and commercial work needed to get the project defined.
16	Why is the power plant larger than the power network can use	Any power plant that wishes to trade in the National Electricity Market has to consider issues of plant failure. It is actually lower cost to have two generator systems, with one as standby, than to trade power contracts to cover any outage. The second gas turbine generator also covers times when routine or emergency maintenance is required.
17	How often does the plant need maintenance of the gas turbines	The industrial heavy duty gas turbines planned for use are scheduled for major maintenance every 48,000 hours or 2,400 starts - that is about 6 years of continuous running. Minor maintenance carried out every 12,000 hours can actually extend out the major maintenance intervals. With two GT sharing the work - changing roles monthly as production and standby - this means that each unit will be serviced every two to three years (minor) and major service every 8 to 12 years.
18	What will it look like? Will it have high exhaust stacks?	The plant is generally low-profile, with much of it contained in sheds or similar structures. Standard silos will be used for dry woodchip storage. With the technology that is proposed there is no need for the huge exhaust stacks like those used for coal fired power stations.
19	Will it have an effect on Kangaroo Island's tourism?	The biomass fuelled power plant will focus on providing the Island with power that is generated in the main from natural resources, so it will enable the Island to promote itself as doing its best for the environment. Having access to more power than the Island actually needs frees up the Island from dependence on the undersea cable, allowing future tourism developments to be planned with confidence. Interestingly this sort of enterprise can actually draw tourists to the Island - this has happened in Samsø Island in Denmark (where the Island chose to become a renewable energy hub for mainland Denmark) and Extremadura in Caceres, Spain (a large and very impressive solar-thermal facility).
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