

Environment Development and Transport Committee

Item No.

Report title:	Norfolk Energy Futures
Date of meeting:	11 November 2016
Responsible Chief Officer:	Tom McCabe – Executive Director, Community and Environmental Services
Strategic impact Norfolk Energy Futures Ltd (NEF) operates to generate income for the County Council principally from the financing, development and delivery of renewable energy opportunities.	

Executive summary

This report provides an overview of NEF by its Board of Directors on its current performance and proposes the strategic direction the company needs to take to meet the future needs of the market.

Recommendations:

- 1) To note the activities of the company to date.
- 2) To consider the future direction of NEF.

1. Proposal

- 1.1 NEF operates as a vehicle to generate income for the County Council principally from the financing, development and delivery of renewable energy projects.

It does this by investing in projects that use the County Council's estate and assets or by working with other organisations and communities to deliver such schemes. To date it has delivered small scale renewable energy projects using small wind turbines and photovoltaic cells.

1.2 Medium Term Strategy

The Board has established three investment categories to give focus to identification of new opportunities:

a) **As a co-investor in new, large scale developments.**

Generally with a value of over £1m these projects could be solar projects, such as large scale commercial roof top schemes, or use other processes like anaerobic digestion utilising food or agricultural wastes, to generate electricity and / or heat. Projects in this category would achieve varying expected returns directly linked to the technology involved. These type of investments would be expected to be with large private investors or energy companies or collaborative projects. NEF would not be expected to have any ongoing operational management role in these type of projects but act as an investor. Opportunities in this category are already identified nationwide.

b) **As sole investor in new, medium scale developments.**

Generally with a value of up to around £1m these would typically be solar projects, viewed as lower risk, with a medium rate of return. These would tend to be delivered using the land or buildings of a public sector organisation (potentially including the County Council) or Trust and would be underpinned by a long term power purchase agreement. Due to their nature these projects are likely to involve direct operational delivery and investment, with ongoing management, via an agent. Opportunities in this category are already identified nationwide.

c) **As sole investor in small scale, dormant projects on existing sites.**

Generally with a value in the range of around £0.5m to £1m these projects would typically be small wind turbine projects using existing sites that are currently inactive (for a variety of reasons), with all the permissions and infrastructure in place. Due to their nature these projects are likely to involve direct operational delivery and investment and ongoing maintenance input. These schemes are likely to be supported by higher rates of subsidies meaning their expected return rate would be higher than new renewable energy projects, even those with a power purchase agreement. A project in this category has been delivered locally and opportunities are already identified locally and are likely to arise nationwide.

It is not envisaged that investments will occur in new developments using small wind turbines as the removal of subsidies for electricity generated from these types of projects means new projects are currently not as attractive as investments as they were.

1.3 Longer Term Strategy Development

To help inform NEF's longer term investment strategy an assessment is being made of opportunities that could be derived from:

- Advances in battery storage.
- The use of energy clubs to get greater income from existing schemes through aggregation.
- Opportunities that could be identified beyond renewable energy projects.

1.4 Governance

There are two levels of governance, a Board and an Investment Panel.

The Board is made up of a Managing Director, Operations Director and Financial Director, all senior officers within the County Council and appointed by the County Council. Its purpose is to discuss projects being proposed and the current operation of the company. If a project is felt to be worthy of investment then an investment decision is put to the Investment Panel.

The Investment Panel is made up of a Councillor, the County Council's Executive Director of Finance and Executive Director of Community and Environmental Services. Its purpose is to consider recommendations of the Board and make decisions on investments in projects.

1.5 Resources

The Board determines the suitable operational and technical resources required to allow projects to be identified, developed, evaluated and delivered based on need, suitable business cases and changing requirements. This is to ensure that the right technical skills are available to support the development and delivery of schemes which will vary in type and complexity and these costs would be included within the business cases.

2. Evidence

- 2.1. NEF has delivered projects using small wind turbines and photovoltaic cells for energy generation listed in Table 1 below. The changing market, in particular the changes to subsidies for renewable energy schemes, has led to a change in the nature of projects which are now considered attractive.

The statutory accounts position on 31 January 2016 showed a declared accumulated loss total of £0.074m. This reflects the position that the early NEF project delivered in 2012, which involved 19 small wind turbines on County Farms land, is not delivering the returns modelled partly due to technical difficulties and additional maintenance costs.

However, through a combination of optimisation and upgrades of the equipment used as well as income from projects recently delivered, the current portfolio is expected to deliver NEF a net return detailed in the table below of £0.301m. More recent projects and principles of evaluating future projects involve higher levels of scrutiny and more robust business cases and are not wholly reliant on government subsidies.

- 2.2. The outline financial position of the operational projects are reflected below.

Table 1: Operational projects

Project	Capital Cost	Total Running Costs	Total Income	Total Net return to NEF	Sources of income
County Farms – Small Scale Turbines	-£0.396m	-£0.204m	+£0.674m	-£0.047m	Feed in Tariff
King's Lynn recycling centre – Photovoltaic	-£0.019m	-£0.015m	+£0.034m	+£0.019m	Feed in Tariff and Power Purchase
Black Drove - turbines	-£0.420m	-£0.125m	+£1.119m	+£0.329m	Feed in Tariff and Power Purchase

The table above indicates the projected cash flow position for existing projects based on current performance. It is anticipated that the County Farms position will improve through maintenance and optimisation work currently being undertaken on the turbines.

The table below identifies two wind projects that are ready for delivery.

Table 2: Projects ready for delivery

Project	Capital Cost	Total Running Costs	Total Income	Total Net return to NEF	Project Life in years
Project 1	-£0.411m	-£0.404m	+£1.678m	+£0.667m	16
Project 2	-£0.058m	-£0.074m	+£0.227m	+£0.069m	16

There are currently seven solar projects in development which are detailed in the table below which uses valid assumptions for running costs, such as ongoing maintenance, to inform the overall future financial position.

Table 3: Projects in development

Project	Capital cost	Total Running Cost	Total Income	Total Net Return to NEF	Project Life in years
Project A	-£0.146m	Tbc	+£0.431m	+£0.156m	20
Project B	-£0.730m	Tbc	+£2.159m	+£0.776m	20
Project C	-£0.344m	Tbc	+£1.073m	+£0.337m	20
Project D	-£0.025m	Tbc	+£0.061m	+£0.019m	20
Project E	-£0.987m	Tbc	+£2.088m	+£0.334m	20
Project F	-£0.191m	Tbc	+£0.562m	+£0.174m	20
Project G	-£3.970m	Tbc	+£7.499m	+£3.075m	20
Total	-£6.393m	Tbc	+£13.87m	+£4.871m	

In addition there are other projects which are in the early stages of development.

3. Financial Implications

- 3.1 NEF was set up to generate income from investments with an expected return for each scheme it delivered. To achieve this NEF was given a pre-approved borrowing limit from the County Council to develop projects. The value invested to date has been around £0.8m in schemes using small wind turbines and photovoltaic cells identified in Section 2.2 above.
- 3.2 NEF has used loans from the County Council to fund projects. To ensure compliance with state aid legislation the loans have been on a commercial basis. This means that alongside the net return position for NEF there is an additional benefit to the County Council from payment of the interest on those loans. For example, for the delivered scheme at Black Drove, NEF expects total income of £1.1m of which NEF retains £0.33m whilst the County Council gains £0.11m from the interest uplift.
- 3.3 Due to the nature of the development of schemes it is expected there would be significant costs relating to schemes in the early years. There is a significant cost / investment required to develop projects in relation to ensuring that projects are evaluated appropriately using the relevant expertise, which would be built into future business cases. There will also be an ongoing cost to manage the projects once they are delivered which will be factored into the NEF business plan to ensure there is sufficient income to cover all operating expenses.

4. Issues, Risks and Innovation

- 4.1 NEF's purpose is to exploit energy investment opportunities to generate income for the County Council. A significant risk is that returns are not in line with projections and technical assumptions of individual projects, or that schemes fail meaning investments lead to a loss.

These risks are addressed by supporting lower risk projects that use proven technologies, subject to the necessary due diligence, and will achieve a lower rate of return. The approach of having a part of the investment strategy focusing on using dormant sites where all the infrastructure is in place also removes a lot of risk involved with starting a project from scratch. In addition for new, larger scale projects an approach is envisaged of investments where NEF operates as a co-investor in investment opportunities created with third parties to help further address financial risks.

Where a project involves technologies that generally attract a higher return due to higher perceived risk, for example projects using anaerobic digestion, it should also be the case that external specialist consultant advice is secured to assess the project to inform an investment decision.

- 4.2 If further projects are not approved there would be a risk that despite a positive position for projects installed recently and improvements being made to the wind turbines used in the first project, NEF's financial position would not be able to improve further.
- 4.3 The renewable energy market in recent years has been exposed to a degree of fluctuation. With the changing state of the energy market, particularly with tariff support from government on renewable energy technology, there is a need to consider diversifying the company into wider energy services, and this is something currently being explored.
- 4.4 The long term trend in the energy market is expected to be for higher prices to consumers. This means larger commercial entities with high energy use are increasingly looking for partners that can assist them in reducing their energy costs. By arranging fixed energy price deals with them over longer periods of time, which undercut the prevailing price, this still enables renewable energy schemes, such as roof-based solar, to be viable.
- 4.5 There is a growing interest in storage and distribution solutions as an effective means to manage demand and squeeze additional value from investments. Local authorities, due to their collective ownership of property and land assets, and their relatively high energy use, are seen as trusted partners for such developments. This is expected to be an area of increasing opportunities.
- 4.6 NEF, as a Teckal compliant entity, has the flexibility to negotiate on behalf of other local authority investors, and is therefore ideally placed to offer a service that can be a faster route to market for certain projects, but meets the local authority's procurement obligations. The Norse group has an energy company, Norse Energy, which is able to operate in a similar market.

Officer Contact

If you have any questions about matters contained in this paper or want to see copies of any assessments, eg equality impact assessment, please get in touch with:

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