

## **Briefing: The Cornish Renewable Energy Industry**

**May 2007**

### **Introduction**

This report outlines the results of a survey undertaken in February/ March 2007 by Regen SW, in partnership with Cornwall Sustainable Energy Partnership, to assess the current capacity, future growth expectations, and support needs of renewable energy companies with a presence in Cornwall. The report is designed to contribute to the development of activities under the EU Convergence Programme that will support the renewable energy sector, as well as to inform discussions in Cornwall and elsewhere on the development of the renewable energy sector.

### **The Survey**

Twenty-seven companies were identified with a significant presence in the renewable energy industry in Cornwall. A series of questions were designed to identify the scale, scope and growth potential of companies as well as areas they felt they may need particular assistance in (see Appendix A). Questionnaires were completed for 19 of the companies identified.

This report is based entirely on those 19 responses and is not a complete record of all companies operating in the renewable energy sector in Cornwall. This report does not cover Cornish companies involved in engineering, buildings, construction and other fields that have the potential to become involved in renewable energy developments.

All information in this report has been anonymised prior to its inclusion. A complete breakdown of results is provided in Appendix B.

### **The Cornish Renewable Energy Industry**

The study identified that Cornwall's renewable energy industry is made up of predominantly indigenous companies with a median age of eight years. The majority of the companies derive 100% of their turnover from renewable energy.

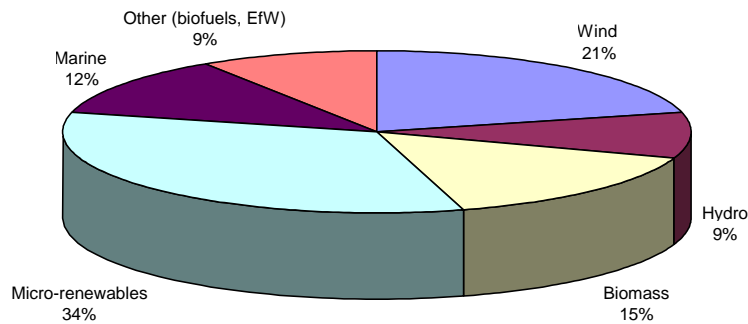
Whilst the industry is made up of companies that operate at local (mainly in micro-renewables) to international (mainly wind and marine renewables) scale the majority of companies questioned make key corporate decisions in Cornwall.

In terms of operations by technology, Cornwall is dominated by the micro-renewables and wind sectors. Across all technologies, project development (including systems installation), consultancy services, research & development (R&D) and operations & maintenance (O&M) are the top four services offered by Cornish based companies.

With 47% of companies currently undertaking some degree of R&D and others planning to do so in the future, R&D levels appear to be high. However, there is limited equipment manufacture being undertaken in the county with only two of the companies questioned active in manufacturing, although others may engage in the future.

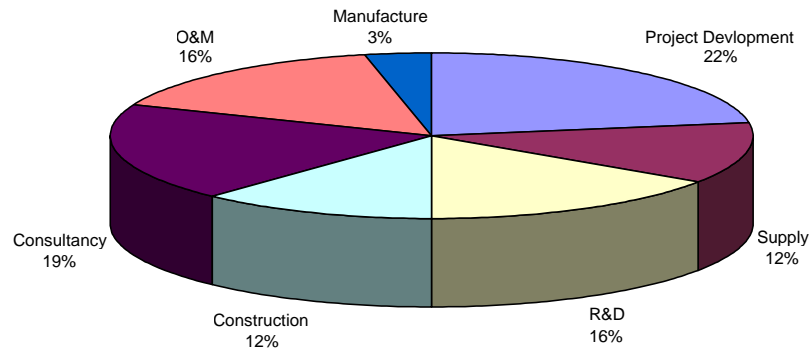
Those companies questioned employ a total of 268.5 full-time equivalent (FTE) employees in Cornwall, including contractors and associates. However, this total includes a significant number employed within non-renewable activities for a few larger companies. Using the percentage of turnover derived from renewable energy as an indicator of employee levels gives a total of 195.6 FTE employees working in renewable energy in Cornwall. The median level of employment is only seven FTEs, with 26% of companies questioned employing two or less employees.

**Company Operations by Technology**



**Figure 1 – Company Operations by Renewable Energy Technology**

### Company Operations by Service



**Figure 2 – Company Operations by Service**

#### **Recent Growth of the Industry**

The last three years has seen a 36% increase in the number of renewable energy companies operating in the county (based on those questioned).

Over that period six companies have seen little or no growth in employee numbers over the last three years, as compared with seven who have seen some or considerable growth over that time period. Two companies have seen employee numbers decline over the last three years, predominantly in-line with project funding cycles.

#### **Future Growth Prospects**

The majority of companies predict very strong or gradual business growth over the next few years; although many see this as dependent upon resources and grants. Important growth areas include: heat generation (including district heating), commercial and household buildings integrated renewables, onshore wind (including repowering), biofuels, and marine energy.

Of the companies questioned, 58% have definite plans to increase employee levels whilst employment growth for another 26% of companies will depend upon market conditions, in particular the availability of grant funding. Employment levels as a whole could increase by 66% over the next three years. However, a large amount of this growth is likely to be outside of the county and will be undertaken by two or three companies.

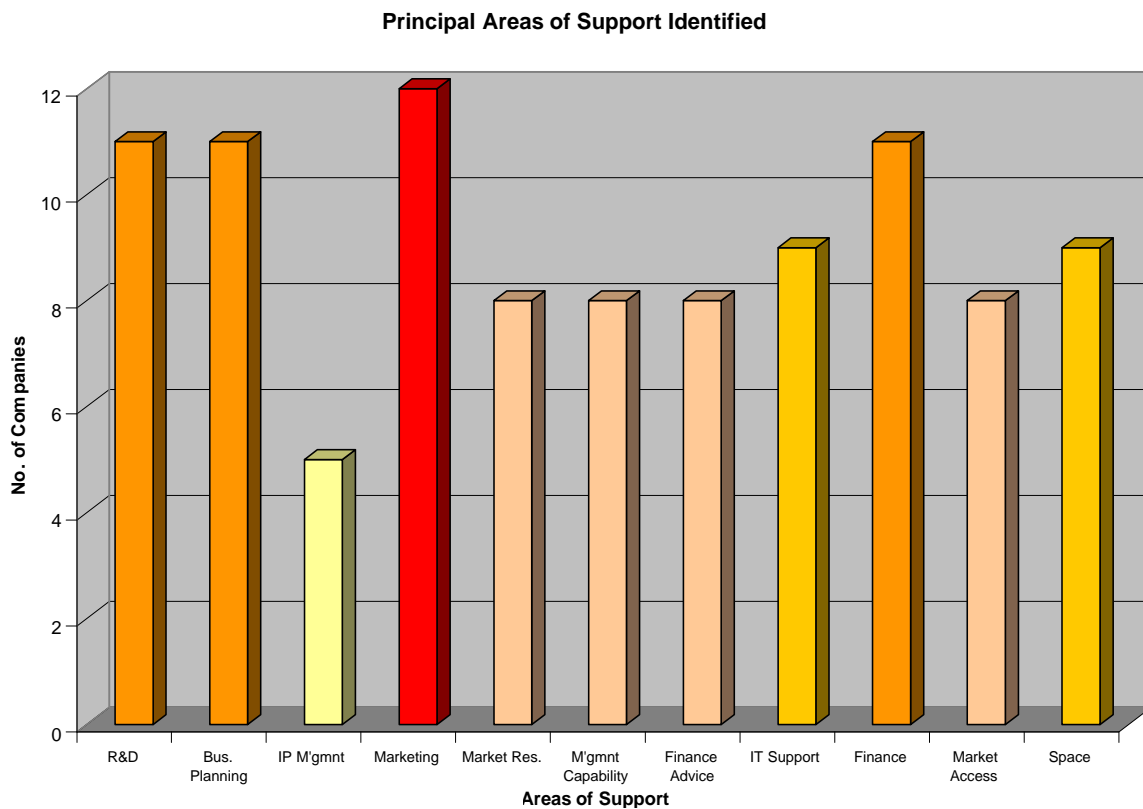
## The Needs of the Industry

Companies were asked to identify which of 11 specific support activities they may need in the next few years. Overall there was strong enthusiasm for support across all areas. The key areas of support needs identified by over 50% of companies include:

- Support for marketing (at both a sector wide and company/product level)
- R&D support
- Business strategy planning
- Access to Finance

Additional areas of support identified include:

- Infrastructure support in terms of both IT and office/ storage facilities was identified as a need by just under half of those questioned
- Support for increasing management capabilities, market research for products/services and accessing national/international markets was important to 42% of companies questioned
- Intellectual Property (IP) management and protection was considered important by 25% of those questioned.



**Figure 3 – Principal Areas of Support Identified**

## **Specific Issues Identified**

Within the areas of support outlined above companies identified specific issues that they felt need addressing and could be supported by the public sector.

### *Finance*

- Access to capital – including a revolving grant scheme providing loans with pay back at financial close – this should provide finance for commercialisation of products.
- Assistance and expertise on accessing funding and finance.
- A pre-production order scheme that allows the public sector to buy products in numbers that stimulate/ support production.
- Seed capital and ways of providing funding for new ideas and technology development.
- Grants for feasibility studies and EIAs.
- Help with securing LCBP grants, including access to LCBP Phase 2 installers, and the provision of alternative grant funding.
- Grant funding for capital projects - particularly in biomass - to ensure exemplars were built and from which development lessons could be learnt.

### *Marketing*

- Active help in getting building developers to take up renewable energy technologies
- Public education on renewable energy developments and technologies and support for companies to raise awareness and provide education.

### *Support for Accessing Markets*

- Inward trade missions – multiple foreign companies coming to a one day exhibition to talk to a range of businesses and organisations on a b2b level.
- Support for decentralised energy; including getting industrial buildings to retrofit renewables. This could include grant aid for the design and installation of renewables.
- Reduced bureaucracy for developers, including the simplification of regulation, supported by action by local authorities.
- Enhanced linkages between companies to provide a unified front in discussions with policy-makers and other stakeholders on key issues for the industry.
- Training for local authority planners.
- Political lobbying to gain planning approval and a reduction in VAT on renewable technologies.

### *Market Research*

- The research and development of a long-term renewable energy plan for Cornwall, in conjunction with key stakeholders, to result in legally binding targets and resources to meet them.
- A research study on the pay-back / economic viability of the use of renewable energy technologies in the public sector.
- Research on what Cornwall would need if it were to become self-reliant in energy needs and what would need to be in place to achieve those needs.

### *Business Planning and Development*

- Information on, and access to, training, including grants for training costs.
- Support for staffing costs for non-technical staff.
- Support for the small scale manufacturing of wind turbines & printed PV.
- Seminars/ workshops discussing/ providing solutions to principal engineering issues for the industry.

### *Research and Development*

- Increased public funding and levels of support (funding percentage) for R&D.
- The clarification of higher education resource capabilities for companies on both R&D and skills.

### *Commercial Space*

- Space for the demonstration of technologies on a commercial scale prior to production.

### **Summary**

Based on this survey a number of conclusions can be drawn regarding the renewable energy industry in Cornwall. These are:

1. Cornwall's renewable energy industry has seen predominantly organic, strong, growth over the last few years, but remains small both in scale and numbers of companies.
2. Project development, consultancy, R&D and O&M are the principal activities undertaken by companies in the county. Micro-renewables and large-scale wind are the technologies most participated in by Cornish companies.
3. The majority of companies are optimistic about the potential for future growth, although for many this is dependant upon policy development, resources and grants. Only a few companies are planning large-scale expansion in the next few years, a significant proportion of which will occur outside the county.

The evidence collected in this report identifies a number of sector specific and generic business needs for the industry. These include:

4. Sector specific support for: finance for the development and commercialisation of ideas and products; research and development; and business development, such as training, mentoring and promotion.
5. The need for support in generic areas such as ICT (the act now initiative has supported many of those questioned) and the provision of quality office/ industrial space that will be of benefit to this and other industries.
6. The expansion of existing activities within the industry in Cornwall including awareness raising, industry events, research studies on key issues and pro-active engagement with policy-makers.

The EU Convergence Programme provides a funding framework that has the potential to support some of the industry needs identified here.

**Further Information:**

- Further details on this report are available from:

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- Further details of the EU Convergence programme for Cornwall is available at [www.southwestrda.org.uk/what-we-do/policy/european-funding-pos.shtm](http://www.southwestrda.org.uk/what-we-do/policy/european-funding-pos.shtm)

## Appendix A: Cornish Renewable Energy Companies Questionnaire 2007

The following questions are deigned to give an idea of the scale, scope and growth potential of companies as well as areas they feel they may need particular assistance in.

1. When did your business start trading in Cornwall?

2. Where are major decisions about company policy and strategy taken? In Cornwall or elsewhere?

3. Which of the following technologies does your company currently cover? Are there any others that you are planning to engage in over the next few years?

- |                  |                              |
|------------------|------------------------------|
| 1. Wind          | 2. Hydro                     |
| 3. Biomass       | 4. Micro-renewables (which?) |
| 5. Marine energy | 6. Other                     |

4. What are the principal areas of operation/ services that your company works in? Are there any others that you are planning to engage in over the next few years?

- |                             |                           |
|-----------------------------|---------------------------|
| 1. Project Development      | 2. Supply                 |
| 3. R & D                    | 4. Construction           |
| 5. Consultancy/ Services    | 6. Operations/Maintenance |
| 7. Manufacturing / Assembly |                           |

5. How many employees do you currently have working on renewable energy related activity in Cornwall (FT/PT/ Contract/ Temporary)?

6. Including both full and part time employees, over the last three years, has your firm's employment in the renewable energy sector in Cornwall:

- |                                       |                           |
|---------------------------------------|---------------------------|
| 1. Been trading less than three years | 2. Decreased a little     |
| 3. Increased a great deal             | 4. Decreased a great deal |
| 5. Increased a little                 | 6. Don't know             |
| 7. Stayed about the same              |                           |

7. Are you planning to increase the number of employees over the next few years? If so, by approximately how many?

8. What is your approximate annual turnover (defined as the total value of invoiced sales (net of VAT))?

- |                        |                        |
|------------------------|------------------------|
| 1. <£50,000            | 2. £500,001 - £999,999 |
| 3. £50,000 - £100,000  | 4. £1m - £5m           |
| 5. £100,001 - £250,000 | 6. >£5m                |
| 8. £250,001 - £500,000 | 7. Rather Not Say      |

9. Approximately what percentage of your annual turnover is generated from renewable energy related activity?

- |             |              |
|-------------|--------------|
| 1. <10%     | 2. 51 – 75%  |
| 3. 10 – 25% | 4. 76 – 100% |
| 5. 26 - 50% |              |

10. How do you see your business developing over the next few years?

- |                             |                     |
|-----------------------------|---------------------|
| 1. Grow very strongly       | 2. Decrease in size |
| 3. Grow gradually           | 4. No real plan     |
| 5. Stay about the same size | 6. Don't know       |

11. Which areas of your activity in the renewable energy sector in Cornwall do you see growing in importance over the next few years?

12. What geographical area do you see as the major market for your goods/ services? Do you see this changing over the next few years?

- |                               |                       |
|-------------------------------|-----------------------|
| 1. Cornwall                   | 2. The rest of the UK |
| 3. The rest of the South West | 4. Internationally    |

13. What are the principal areas of support which you may need over the next few years?

- |  |   |
|--|---|
| 1. R&D support (incl. tech transfer)       | 2. Business strategy planning                             |
| 3. IP management & protection              | 4. Marketing support                                      |
| 5. Market research for products & services | 6. Management capability support                          |
| 7. Financial advice/ investment readiness  | 8. Increasing the use of ICT                              |
| 9. Finance (public/ private)               | 10. Support for accessing international/ national markets |
| 11. Incubation space                       | 12. Other (please specify)                                |

14. Are you aware of the working relationship between Regen SW and Cornwall Sustainable Energy Partnership (CSEP) and the role in local partnership and policy work that CSEP plays?

YES / NO

15. What additional services would you like to see delivered locally by CSEP ? e.g. participation in local carbon monitoring, carbon trading schemes, participation in ESCo development schemes.

## **Appendix B - Results by Question**

### **1. Period of Trading**

- The median age of companies is eight years (1999).
- The period of trading range is from one to 31 years.
- Five companies (26% of those contacted) have been trading for three years or less.

### **2. Decision-making Location**

- A majority of the companies questioned have headquarters in Cornwall.
- Of those that didn't have headquarters in Cornwall, they all had significant decision making autonomy within the county.

### **3. Company Categorisation by Technology Involvement:**

- 11 companies operate in the Micro-renewables sector.
- Seven companies operate in the Wind sector.
- Five companies operate in the Biomass sector.
- Four companies operate in the Marine sector.
- Three companies operate in the Hydro (predominantly small-scale) sector.
- Three companies operate in other sectors, namely biofuels or energy from waste.

### **4. Principal areas of Operation and Services by Company:**

- 13 companies are engaged in Project Development
- 11 companies are engaged in Consultancy or other Service provision.
- Nine companies are engaged in Research & Development.
- Seven companies are engaged in Equipment Supply.
- Seven companies are engaged in Construction.
- Nine companies are engaged in Operation & Maintenance.
- Two companies are engaged in equipment Manufacture.

### **5. Number of employees**

- There are a total of 268.5 FTE in all the companies questioned.
- This total includes full and part-time and a high level of contract and associate employees.
- Approximately 72 of these employees are employed in non-renewable energy activity.
- The median number of employees by company is seven.
- 26% of companies questioned employee two or less employees.

**6. Growth in Employees over last three years.**

- Seven companies have seen employment growth increase a little (1) or a great deal (6).
- Six companies have seen little or no employment growth.
- Four companies have been trading for less than three years.
- Two companies have seen employment decline a great deal.

**7. Planned Employment Increases.**

- 11 Companies have definite plans to increase employee levels.
- Five companies planned to increase employee levels depending upon market conditions (including the grants system).
- One company (a sole trader) was definitely not planning on increasing employee numbers whilst two did not know.
- By 2010 the companies questioned planned to increase employment levels by a total of 186 FTE.
- A large proportion of additional jobs would be outside the county and/or within subsidiaries.
- Employment increases would be dominated by one or two companies, with some others predicting undefined, but significant, rises in employment.

**8. Approximate annual turnover.**

- Insufficient data was gathered for this question to make any useful conclusions.

**9. Percentage of annual turnover from renewable energy.**

- Nearly 90% of companies questioned drew 100% of their turnover from renewable energy activity.

**10. Perception of Business Growth over next few years.**

- 16 companies predict very strong (13) or gradual (3) business growth; although many see this as dependent upon resources/ grants.
- Two companies expect to stay about the same size..
- No companies expected to see a decrease in size, whilst one company did not know.

**11. Expected areas of important growth**

- Heat generation technologies, in particular heat pumps.
- Opportunities for renewable energy inclusion within commercial and housing developments (including social housing).
- The development of biofuels
- The development of offshore wind and marine energy.
- New and repowering of onshore wind farms.

## **12. Geographical areas of operation**

- Seven companies operate internationally, with a further 2 companies considering international opportunities.
- Five companies operate nationally.
- Four companies operate in Cornwall only.
- Two companies operate in the South West only.

## **13. Principal areas of support required over next few years.**

- 12 companies identified Marketing support needs.
- 11 companies identified a need for public or private sector finance.
- 11 companies identified Research & Development needs.
- 11 companies identified business strategy planning needs.
- Nine companies identified incubation or other space needs.
- Nine companies identified needs for support in increasing the use of ICT.
- Eight companies identified Financial advice/ investment readiness needs.
- Eight companies identified a need for support in accessing international/ national markets.
- Eight companies identified Market Research needs.
- Eight companies identified Management Capability support needs.
- Five companies identified IP management & protection needs.

## **14. Awareness of the relationship between Regen SW and CSEP and the role CSEP plays.**

- 90% of companies who responded to this question were aware of the relationship between Regen SW and CSEP and the role CSEP plays in supporting the renewable energy sector in Cornwall.

*Regen SW is core funded by the South West of England Regional Development Agency*