



## **B&NES Renewable Energy Evidence work**

**Kaoru Jacques –  
Planning Policy Officer  
[kaoru\\_jacques@bathnes.gov.uk](mailto:kaoru_jacques@bathnes.gov.uk)**

## Renewable Energy Research and Planning (June 09)

### Renewable Energy Technologies Considered

- Wind – large scale and smaller scale turbines
- Biomass and Waste inc. Combined Heat and Power
- Hydro
- Solar Photovoltaics (PV)
- Solar Thermal Hot Water (STHW)
- Ground Source Heat Pumps (GSHP)
- Geothermal



## Recommended renewable electricity & heat targets

	<b>B&amp;NES Potential Targets</b>	<b>South West Targets</b>
<b>Electricity 2020 Target Capacity</b>	56 MWe	850 MWe
<b>Electricity 2026 Target Capacity</b>	80 MWe	
<b>Heat 2020 Target Capacity</b>	101 MWth	500 MWth
<b>Heat 2026 Target Capacity</b>	186 MWth	

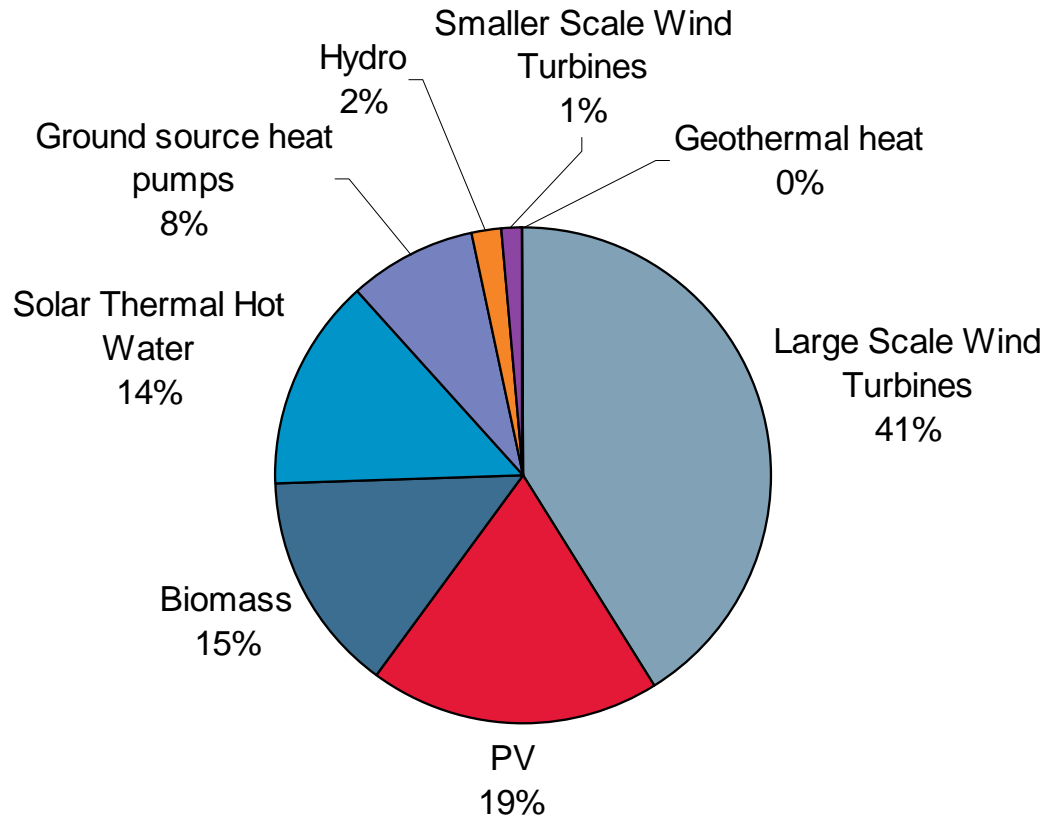
## What might be required to achieve the 2020 electricity and heat targets (indicative)

Technology	2020 target
<b>Wind turbines – large scale</b>	Up to 9-10 large turbines
<b>Wind turbines – small scale</b>	About 10 smaller turbines
<b>Biomass</b>	Would require 393,000MWh of biomass resource for potential demand from new and existing build. B&NES current biomass resource is 98,200MWh.

<b>Waste</b>	All organic kitchen, garden, supermarket and farm wastes should be processed in Anaerobic Digestors (AD)
<b>Hydro</b>	Approximately 3 hydro sites
<b>Solar PV</b>	13.5% uptake on existing stock,

<b>Solar thermal hot water</b>	19% uptake on existing building stock. Approx 30-40% uptake on new buildings
<b>GSHP</b>	5% uptake on existing stock.
<b>Geothermal heat</b>	Heat from the hot spring discharge realized e.g. for heating the Abbey.

### 2020 Target Renewable Energy Mix (contribution to CO2 reductions)



## Further works (Studies)

<b>Further consultant works</b>	<b>Completed by</b>
<b>Renewable energy update</b>	<b>Summer 2010</b>
<b>Land Capacity Assessment and Visual Impact Assessment for wind turbines</b>	<b>June 2010</b>
<b>Biomass resource assessment (linking with Green Infrastructure ?)</b>	<b>2010/11</b>
<b>Heat maps (Regen SW)</b>	<b>Complete early April</b>
<b>District heating feasibility assessments for town centres – RE Action Areas</b>	<b>Summer 2010</b>
<b>SFRA level 2 Restock additional work</b>	<b>Complete late March</b>
<b>A peak oil impact assessment</b>	<b>?</b>

## **Land Capacity Assessment and Visual Impact Assessment for wind turbines**

- Part 1            Landscape sensitivity assessment for small and medium/large turbines
- Part 2            Landscape and visual impact assessment for medium /large turbines (45 turbines)
- Part 3            Capacity analysis for small, medium and large turbines for the district as a whole (cumulative issues)

## Further works

Training	Officers Trainings – Centre for Sustainable Energy (CSE ) Members Trainings – CSE Parish Councils Community Groups
Guidance	Planning Guidance Check List Micro generation
Renewable Energy Action Areas (CSE) Somer Valley	Skills and Training Renewable energy potential Community groups