

Environmental and Social Data Sheet

Overview

Project Name: Severn Trent Climate Action

Project Number: 2011 0482

Country: United Kingdom

Project Description: The Project consists in an EIB loan for up to GBP 530m in favour of Severn Trent Water Ltd, one of the largest UK water and sewage regulated utilities, for the purpose of financing its investment programme that includes a number of Climate Action-related components, for the period 2013-15

EIA required: yes

Project included in Carbon Footprint Exercise¹: no

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The Programme is strongly environmentally driven and therefore has predominantly positive effects on the environment. In particular, it will contribute towards ensuring compliance with EU environmental directives, including the Urban Wastewater Treatment Directive and the Water Framework Directive. The Programme is based on requirements set by the quality and environmental regulators as well as:

- a Strategic Direction Statement providing a 25 year vision, including indicative planning of physical interventions over 5 regulatory periods.
- a Water Resources Management Plan (WRMP) providing a long-term view of the availability and demand for water throughout the service area (the most recent dating from 2009), which is a statutory requirement set out in the Water Act.

Climate change pervades many investment decisions, from ensuring service levels in the future, including under extreme conditions, to creating greater climate resilience of the service area (and contributing to resilience at national level) through improved water management. The key objectives of the programme include improving the resilience against (i) floods affecting the treatment works and the vulnerable parts of the sewer network and (ii) droughts through loss reductions and demand management. If a water trading system that is currently under discussion were put in place this could also enhance resilience in other areas of England and Wales that are even more affected by water scarcity.

The promoter complies with the requirements of EU EIA Directive 2011/92/EU, as well as Article 6 of the Habitats Directive 92/43/EEC. A dedicated "Environmental Team" carries out environmental screening procedures for all capital projects in order to identify environmental constraints and required regulatory consents. Environmental Impact Assessment procedures and appropriate assessments for impacts on Natura 2000 sites are carried out where required by the competent authorities and mitigating measures are applied as appropriate. The promoter has set itself ambitious environmental targets for the future, including the reduction of greenhouse gas emissions by 21 per cent, compared to 1990 levels, by 2015. Severn Trent

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

is a leader in the UK water sector on renewable energy generation and currently produces 17% of its gross electricity usage, largely utilising this to supply its operations, and aims to surpass the UK Government target (20% renewable energy by 2020) by 2013.

An SEA, covering the major AMP5 project components was carried out as part of its statutory Water Resources Management Plan. With regards to Natura 2000 and Ramsar sites, Severn Trent took the Plan through the process that would be required for a stage 1 screening Habitats Regulations Assessment (HRA). The HRA, based on the level of detail available at the time of the final WRMP, indicated that it was unlikely that there would be any significant impact on Natura 2000 or Ramsar sites. However, all schemes that were identified within the HRA screening process as having the potential to have a significant effect were subject to further assessment at project design to determine whether, based on the additional design information, the scheme could have a likely significant effect.

As not all project components have received all necessary permits yet, the usual undertaking will be included, namely: The Promoter shall not commit any EIB funds against schemes that require an EIA according to EU and national law without, prior to commitment, submitting the EIA and the non-technical summary of the EIA to the Bank for review and publication on the Bank's website. The promoter shall not commit any EIB funds against any scheme without receiving consent from the competent authority regarding the Habitats directive and submitting the relevant forms to the Bank prior to the commitment of EIB funds.

The project is as such, acceptable for Bank financing.

Environmental and Social Assessment

Environmental Assessment

The national regulators determine the framework for environmental investments for each regulatory period and the companies propose, on this basis, a set of necessary environmental investments. Each environmental investment proposal is then reviewed by an independent consultant appointed by OFWAT before being approved and taken up into the investment programme.

Environmental protection and climate change considerations pervade STW's investment decisions, which were supported by a Climate Change risk Assessment and a Climate Change Adaptation Strategy. STW's five-year Business Plan, of which the projects is part, driven by four main objectives:

1. Reducing the risk of 1.47 million customers losing their water supply by:
 - a. Increasing the resilience of STW's strategic network, including to climate hazards, through diversification of water sources for communities beyond 20,000 inh., flood protection and adaptive interventions (eg removing points of failure and providing resilience power supply) for key treatment works. Flood resilience measures include the raising of vulnerable assets such as control and electrical equipment, provision of bunds and chamber walls to prevent flood water entering, and sealing of buildings. Options assessments are checked by OFWAT and flood modelling is carried out in coordination with the EA.
 - b. Reducing water losses through pressure management and mains replacement.
 - c. Improving water demand management by increasing domestic customer metering through promotion of a free meter option and compulsory metering trials linked with changes in property occupancy, and by working with all customers to install water efficient equipment and promote water conservation.
2. Improving the reliability and safety of water supply to address the deterioration of groundwater and surface water sources that is largely driven by farming activities. The programme also includes support for enhanced catchment management aimed at

changing farm practices (eg reducing the use of nitrates and pesticides) so as to lower the need for investment in additional treatment.

3. Improving wastewater services:

- a. To meet increasingly stringent environmental standards linked primarily with phosphorous removal to meet the Urban Wastewater Treatment Regulations (UWWTR), following the designation of the River Trent as a Sensitive Area. From the National Environmental Programme, in agreement with the EA, only the interventions deemed necessary to meet the essential obligations were retained. A similar approach was adopted to meet the requirements of the Water Framework Directive, with attention being given to coordination with the reduction of other sources of pollution (e.g. phosphates from detergents and farming). Other schemes aim at reducing pollution incidents, e.g. through better detection, and odour from wastewater treatment plants
- b. To improve resilience to climate-related impacts, with a special focus on reducing sewer flooding in urban areas, which is ranked very high in customer's willingness to pay surveys. This is being addressed by dealing with hydraulic inadequacies of sewerage systems and by separating urban drainage and sewerage systems to the extent possible. Improved coordination with authorities in charge of territorial planning is also being sought by STW, which is not a statutory consultee in this process but is exposed to the costs of having to connect any development to its system.

4. Climate change mitigation measures consistent with the Climate Change Act 2008 - In terms of climate change mitigation, STW has set a challenging goal to work towards reducing its CO₂e emissions by 21% compared to 1990 levels by 2015. For AMP5, by 2014/2015 no net emission reductions had been foreseen, yet net reductions by 6% were achieved in 2011/12 vs 2010/11 to 521.7 ktCO₂e. This compares against the Business Plan forecast for net emissions of 564.8 ktCO₂e per year by 2014-15. In Q2 and Q3 of 2012, STW experienced a deterioration in the GHG emissions KPI for OFWAT, but remains one of the best performers in the sector. Negative pressures on emissions are due to increasing quality and environmental standards, which increase energy use. These are counterbalanced by gross emission reductions from:

- a. Increased renewable electricity generation, for which STW is sector leader and produced 24% of its gross electricity usage (outperforming its 5-year plan), primarily from its combined heat and power plant, operating on biogas from sludge digestion, but also through hydropower and wind turbines. STW aims to generate 30% of its consumption by 2014/15.
- b. Energy efficiency measures, such as pump efficiency and real time pump optimisation and control
- c. Reduced water into supply as a result of leakage reduction and demand management
- d. Employees relocating to a new, energy-efficient office in Coventry

STW is evaluating projects including an assessment of "embodied" carbon i.e. the carbon involved in the construction of assets and working with its supply chain partners to meet or improve upon these predicted levels. Some projects were included in its investment programme as a result of taking the cost of carbon into account in economic assessments.

Where a project requires planning permission and may impact on a Natura2000 site, an Appropriate Assessment is required under the Conservation of Habitats and Species Regulations 2010. These regulations are the principal means by which the Habitats Directive is transposed in England and Wales. The Appropriate Assessment considers whether the project will adversely affect the integrity of the Natura2000 site and informs the planning decision.

Where a project requires an environmental permit or licence to operate the regulator (Environment Agency - EA) will consider its potential impact on any European protected sites, to comply with the Environmental Permitting Regulations (England and Wales) 2010. The Regulator will ensure that any permission they grant will not have a harmful effect on the environment and cultural heritage sites, and would include conditions in a permit to avoid adverse effects on any European site, over and above those to ensure compliance with the permit regulation. The regulator will also take into account any Environmental Impact Assessments that may be required for a planning application in their permit determination.

All projects have been or will be screened for any impacts on Natura2000 sites or relevance to the Habitat Regulations. The information provided to the EIB for the schemes to be financed under this project indicates the following: (i) water supply resilience components: 5 sites affected, 3 components under review and 7 components where monitoring will take place (in cooperation with the EA, plus sometimes English Nature and English Heritage) even though the project is not in a "Site of Special Scientific Interest" (SSSI); (ii) water quality components: mitigation measures for 3 sites, (iii) increased water supply capacity: surveys being carried out in relation to 4 schemes; (iv) wastewater treatment improvements: 3 located in a SSSI and 11 in a Special Area of Conservation.

One of the largest schemes concerns the flood resilience measures at the Mythe water treatment works, which are located in a conservation site and include two listed structures. The interventions required eight separate permits and numerous public consultations. Mitigation measures included the design of a specific device to reduce noise-induced stress in protected fish species due to the drilling linked with the construction of a barrier. Care was also taken to design solutions that would maximise protection while minimising visual impacts from the surrounding areas.

The programme emissions savings compared to the baseline are not expected to surpass the 20kt savings relevance thresholds. In terms of absolute emissions, the programme is expected to maintain carbon emission for Severn Trent's service system unchanged between 2009/10 and 2014/15. Significant emissions increases resulting from higher wastewater treatment standards will be offset through the reductions from amongst others:

- Measures to achieve significant efficiencies in energy use.
- Additional electricity generation projects, in particular using sewage sludge as a renewable energy source, to build upon our leadership position in the water sector.

Social Assessment, where applicable

n.a.

Public Consultation and Stakeholder Engagement, where required

STW designed its investment programme based on a willingness to pay survey of its customers.

Consultations under the EIA process are carried out according to European legislation.

Other Environmental and Social Aspects

n.a.