Energy Savings Plans

Energy Savings Plan Guidance

1. The purpose of this document is to provide guidance to the *Provider* on preparation of an Energy Savings Plan for roadside equipment.

2. The objective of the plan is to provide an ordered and controlled means of achieving a reduction in the energy consumption of all Highways England's roadside equipment. Achieving this objective will be the responsibility of the *Provider* and is expected to include actions such as the removal of inefficient street lighting, improved and innovative operation of lighting and technology equipment and improvements in the data accuracy of all energy consuming asset recorded in inventories.

3. The plan must:

    a. set out how the *Provider* will reduce area energy consumption by at least 8.6%* the end of Contract Year 5,

    b. must follow the template in Appendix A and contain the information described,

    c. incorporate existing Area energy savings plan, where possible.

4. The *Provider* must include this plan as part of the Environmental Management Plan described in the Asset Maintenance and Operational Requirements.

***** The Carbon Budgets Order 2009 (2009 No.1259 Article 2) www.legislation.gov.uk

Appendix A

Energy Savings Plan Template

Roadside Equipment Energy Savings Plan [*contract start date*] (+5 years) Onwards Annual Network Energy Consumption Reduction

Area [XX]

Document Control

{This Plan must be reviewed at least annually to reflect in-year changes and progress.}

Contents

Executive Summary
1. Introduction
2. Background
3. Baseline Data
4. Current Position
5. Approach
6. Trajectory
7. Monitoring
8. Resource Requirements

Annexes
A. Baseline Data
B. Extent of Existing Road Lighting Maps
C. Lighting Replacement Schedule
D. Planned Maintenance Schedule
E. Improvement Scheme Schedule
F. Major Projects Schedule
G. Energy Savings Trajectory Quarterly Profile
H. Financial Profile for extra-over costs of energy saving interventions

Executive Summary

The executive summary must include a summary matrix relating to road lighting (the main contributor of roadside equipment energy consumption) along the following lines:

Lighting Installation	**Intervention Year**				
	Removal	**Midnight Switch Off**	**Dimming**	**Energy Saving Lamps**	**Trimming / CMS**
#1 Road between x and y	2011				
#2		2010			2010
#3			2012		2011
#4				2012	2012
#5					
#6					

A table such as this provides an easily digested overview of the programme.

Roadside Equipment Energy Savings Plan [*contract start date*] (+5 years) Onwards Annual Network Energy Consumption Reduction

Area [XX]

1. Introduction

• Purpose of document
• Forms part of the Environment Management Plan

2. Background

- Reference HA Energy Strategy for Roadside Equipment
- The Carbon Budgets Order 2009 (2009 No.1259 Article 2) (www.legislation.gov.uk)

The provider will formulate an energy saving plan to reduce energy consumption by at least 8.6% by the end of contract year 5.

Where new equipment is installed and consumption increases, for example some Managed Motorway schemes, the provider will present evidence to demonstrate that equipment installed is the most energy efficient available for that particular scheme.

3. Baseline Data

Within the first contract year the provider will gain a competent understanding of the energy consumptions of lighting and technology assets within their management Area and present this in report form to HE staff. Once agreement has been obtained from HE staff that consumptions are valid this will be used as a baseline for future savings.

• Provide tables by equipment type at Annex A (Baseline Data).

4. Current Position

• Must reflect savings achieved to date.
• Must provide / update small scale maps at Annex B (Extent of Existing Road Lighting Maps) showing the extent of existing road lighting. The purpose of these is to provide an overview of the current provision to inform more targeted and detailed examination on the type of appropriate intervention given the characteristics of each section of road.

5. Approach

• All bids, studies, design and operation quality processes and procedures need to ensure that the potential for energy savings is taken into account when considering schemes and carrying out maintenance.
• Annex C (Lighting Replacement Schedule) must provide lighting / cable replacement schedules with an indication of the potential for further / future energy saving interventions including the removal of inefficient lighting equipment.
• Annex D (Planned Maintenance Schedule) must provide roadside equipment planned maintenance schedule with an indication of the potential for further / future energy saving interventions including

○ Road lighting bulk lamp change
○ Road lighting lantern change
○ Road sign maintenance
○ Photo-electric cell change

• Annex E (Improvement Scheme Schedule) must provide improvement scheme schedule with an indication of the potential to include further / future energy saving interventions. Limit to those schemes which include roadside equipment.
• Annex F (Major Project Schedule) must provide Major Project schedule with an indication of the net change in power consumption. Limit to those schemes which include roadside equipment.
• Highways England Regional Teams will need to satisfy themselves that proposed interventions represent value for money.

6. Trajectory

• Annex G (Energy Saving Trajectory Quarterly Profile) must provide a summary table of energy savings by Quarter for each Year with a chart showing the expected trajectory to achieve the Contract Year 5 aim along with any future annual savings.

7. Monitoring

• Energy / carbon saving monitoring will continue as currently undertaken or contractually required, but will be administered in-house with support from the Asset Management Office and TTD Sustainability Coordination Group.
• The spreadsheets used for monitoring purposes may be used to provide or assist in populating some of the schedules suggested as Annexes.

8. Resource Requirements

• Annex H (Financial Profile for extra-over costs of energy saving interventions) must provide a forecast financial profile (limit to extra over costs of energy saving interventions).