

Information Note

Background

In 2009, Ireland set a target to improve its energy efficiency by 20% by 2020. The setting of this target responded to the requirements of the EU [Energy Efficiency Directive 2012/27/EU](#).

Since the adoption of the Directive, a series of [National Energy Efficiency Action Plans](#) (NEEAPs) have been published by the Department of Communications, Climate Change and Natural Resources. The most recent NEEAP, no.4 2017-2020, states that, based on assessment by the Sustainable Energy Authority of Ireland (SEAI), less than 12% of the national target of 20% had been achieved by the end of 2016. NEEAP no.4 requires, accordingly, an intensification of efforts and additional investments if Ireland is to meet its 20% target.

Energy Efficiency in Public Sector

While the national target is 20%, Ireland has set a more ambitious target of 33% for the Public Sector, requiring the Public Sector to play a leadership role towards the achievement of the national target.

NEEAP no.4 states that, by the end of 2015, energy efficiency in the Public Sector had improved by 21% (the baseline year for measurement of efficiency improvement is 2009 for most Public Sector organisations, including TII).

The first [Public Sector Energy Efficiency Strategy](#), published in early 2017, is intended to provide a framework to build on progress already made.

TII's Energy Consumption and Efficiency

Work is underway in assessing TII's energy consumption and efficiency with a view to identifying options which might be pursued towards meeting the 2020 target. This review identified that 45% of TII's overall electricity consumption is consumed on traffic route lighting on national roads under TII's direct control.

As a result, traffic route lighting became an important focus in terms of identifying measures to reduce energy consumption, in accordance with the NEEAP's requirements.

TII has, accordingly, developed a strategy aimed at reducing the amount of energy consumed by traffic route lighting focusing on three key areas:

- removal of surplus lights,
- dimming/voltage regulation, and
- replacement of existing fittings with LED.

Implementation of strategy

TII has identified 40 motorway junctions designed to the older standard which contain significant surplus lighting when compared to latest standards.

Initially (by the end of July 2017), TII will commence the removal of surplus lighting which is not required under the latest standards from the following 4 motorway junctions:

- M1 Junction 6 (Balbriggan)
- M6 Junction 3 (Rochfortbridge)
- M9 Junction 3 (Athy)
- M4 Junction 9 (Enfield)

Energy and Cost Savings

Significant energy and cost savings are expected from this work. The typical level of energy savings at each junction is 70%. This will save 4 million kWh of energy and almost 2,000 tonnes of CO₂ per year. This will represent an important step for TII in working towards our 2020 energy reduction targets.

In monetary terms, an overall cost saving of €800,000 per year is expected for the 40 target junctions, derived from both energy and maintenance savings.

What Happens Next?

These junctions will be monitored for a 9 month period, following which it is intended to roll out a similar treatment to the remainder of the 40 junctions identified as having surplus lighting.