

NOTES ON ENERGY BALANCES

TPER or Total Primary Energy Requirement (TPER) is a measure of all energy consumed in Ireland, including that consumed and/or lost in transformation and transmission/distribution processes (e.g. electricity generation transmission and distribution; oil refining).

TPER=Indigenous Production + Imports - Exports - Marine Bunkers -Stock Change.

Electricity Generation as it is mentioned here includes both electricity produced by the ESB (public) and that by autoproducers, either consumed by them or fed into the national grid.

TFC or Total Final Consumption represents the amount of energy consumed by the different sectors of our economy after all transformations have been completed. It also excludes any losses that may occur in this process or in the transmission of these secondary sources of energy. The processes are the generation of electricity, oil refining, and the production of briquettes (production of secondary energies).

The difference between the sum of indigenous production and imports and the total primary energy requirement of natural gas represents the amount of natural gas used as raw material (feedstocks) in a manufacturing process and not burned as fuel.

The common unit chosen is a tonne of oil equivalent (TOE). This is an international standard measure of energy value and is defined as 10^7 kilocalories. The figures in the table differ slightly to those contained in various international publications. This occurs for a number of reasons, primarily the following:-

- different conversion factors (see below) employed to the raw data;
- different treatment of non-energy products, such as natural gas consumed in manufacturing industry as feedstock and not burned as fuel. These amounts are excluded from our TPER figures, while they are currently included by the various international bodies in their calculations;
- petroleum coke is included in coal whereas most international publications classify it as oil.

Conversion Factors

Crude Oil	: 1 Tonne	= 1.0226 TOE
Gasoline	: 1 Tonne:	= 1.0650 TOE
Kerosene	: 1 Tonne	= 1.0556 TOE
Jet Fuel	: 1 Tonne	= 1.0533 TOE
Gas/Diesel Oil	: 1 Tonne	= 1.0344 TOE
Residual Fuel Oil	: 1 Tonne	= 0.9849 TOE
Milled Peat	: 1 Tonne	= 0.1860 TOE
Sod Peat	: 1 Tonne	= 0.3130 TOE
Briquettes	: 1 Tonne	= 0.4430 TOE
Coal	: 1 Tonne	= 0.6650 TOE
LPG	: 1 Tonne	= 1.1263 TOE
Electricity	: 10 ³ units	= 0.0860 TOE
	: 1 Gwh	= 86 TOE
Natural Gas	: 1 TJ	= 21.54 TOE