

Guidance Document - Wheeling 2005/06

The extracts contained in this document relate specifically to electricity that is generated at one site and then deemed to have been transported through the NIE Transmission and Distribution System to another site for consumption. This process is often referred to as “wheeling” and these extracts are provided to assist those considering undertaking this form of generation. The rules are detailed and we would strongly advise you to seek independent advice if you are in any doubt about your business case. The wheeling arrangements managed by NIE are restricted to generator connections above 100kW. Embedded generators with connected capacity of 100kW or below may seek alternative arrangements with NIE PPB or a licenced supplier in Northern Ireland.

An administrative charge of £22 will be levied on exempt suppliers by NIE each month as a contribution towards the cost of supporting the wheeling arrangements.

➤ **Extract - Wheeling NIE Second Tier Supplier Guidelines**

(Ref: Northern Ireland Electricity plc, Second Tier Supplier Guidelines, Version 2.0 and dated 28th August 2003)

5. Wheeling by Exempt /Small Scale Suppliers

5.1 What are Exempt/Small Scale suppliers?

Exempt/Small Scale suppliers normally will not need a Supply Licence when compliant with Class A of the Exemptions Order. Class A applies to people who supply electricity they have generated themselves (together, if necessary, with electricity from a licensed supplier) up to the quantity permitted by the Exemptions Order.

You can also be an Exempt/Small Scale supplier if you generate electricity solely from CHP and fall within the exemption in Class C, paragraph (b)(iv) of the Exemptions Order.

An Exempt/Small Scale supplier may also sell renewable energy to the PPB provided the maximum export capacity of the generating unit does not exceed 100kW. The generator requires to apply to Ofgem for accreditation for LEC's and to register with PPB for the tariff.

The terms of the exemptions are complex and you should seek independent

advice about whether you fall into either of these categories.

5.2 What is wheeling?

Wheeling occurs when electricity is generated at one site and then is deemed to have been transported through NIE's System to another site for consumption.

Wheeling involves a number of calculations:

- a) The total output of the generator;
- b) The total amount consumed on the same site as the generator;
- a) The total amount exported to the NIE System and of that, how much is "wheeled" electricity and how much is "spill". NIE PPB will pay the generation spill price for any exported energy,
- b) The total amount consumed at the destination site, above the "wheeled" electricity volume (that has to be purchased from an STS or NIE Supply).

5.3 Qualifying Categories & Examples

The effect of the Exemptions Order is to create 4 broad categories for wheeling, depending on the type of generation set you have. Different rules apply to each method of generation. These rules are very complex and you should seek advice on if and how they apply to you.

a) *Fossil fuel generating sets*

The on-site load is calculated by subtracting the export volume from the generation output. The number of wheeled units is the difference between the on-site load and 500 kW so that the spill is equal to the export volume less wheeled units.

Example:

Generator output equals 700kW. Export equals 650kW. Site load equals 50kW. Wheeled units equal 450 (i.e. 500-50). Spill equals 200kW (i.e. 650-450).

b) *Non-fossil fuel generating sets*

If you have non-fossil generating sets, you can wheel up to 1MW. On-site load is disregarded for this calculation. The excess above 1MW is treated as spill.

Example:

Generator output equals 3MW. On site load equals 1.5MW. Export equals 1.5MW. Wheeled units equal 1MW. Spill equals 0.5MW.

c) *CHP sets (on-site supply and wheeling)*

If you have this type of generating set, one option is to wheel up to 500kW of electricity. For this purpose, any supply to consumers on the same site as the CHP set is disregarded. Any excess is treated as spill.

Example:

CHP output 1200kW. On-site demand 600kW. Wheeled to unrelated customer 500kW. Spill 100kW.

d) *CHP generating sets (intra-group)*

If you have this type of generating set, another option is to wheel up to 1MW of electricity to the companies corporately related to you. For this purpose, the 1MW limit is reduced by the amount of any electricity you have supplied under the arrangement referred to in paragraph c) above.

Example:

CHP output 1700kW. On-site demand 600kW. Wheeled to unrelated customer 500kW. Wheeled to affiliate 500kW. Spill 100kW.

5.4 Small Renewable Spill Tariff (Under Review by NIE PPB / Ofreg)

If your renewable generation capacity is 100kW or less you can receive a spill payment, which is currently 4.5 p/kWh (please check price with PPB). To qualify you have to apply to Ofreg and OFGEM for accreditation. You may then register with PPB for the Tariff. All Levy Exemption Certificates and Northern Ireland Renewable Obligation Certificates (NIROC) would become the property of PPB under this arrangement. Alternatively you may obtain spill payments under normal arrangements and retain ownership of any NIROCs if you find this more beneficial.

5.5 What else do you need to do, charges & spill entitlements.

- a) You must ensure that you (and members of your qualifying group) enters into a Connection Agreement with NIE for each of their demand points. The procedure for entering into this agreement including your obligations is set out in Appendix 3.
- b) You must comply with the Grid Code (including the Metering Code). This obligation arises through your agreements with NIE. The Grid Code contains the technical rules for the operation of the NIE transmission and distribution system.

- c) You need to enter into a Use of System Agreement with NIE under which you agree to pay NIE's use of system charges. NIE Network Pricing can provide more information, contact details are provided in Appendix 2. You must pay NIE's Use of System charges for all units wheeled across the network.
- d) You must pay the Public Service Obligation Charge (PSO) and System Support Services Charge (SSS) for all units wheeled. The PSO charge is recovered by PPB and the SSS charge is recovered by SONI. In practice PPB is allowed to act as an agent for SONI and to collect the SSS for it. These charges are recovered on all other units through an Interim Settlement Agreement, ROF Participation Agreement or a BST Agreement. The current rate for SSS and PSO are published in the Bulk Supply Tariff leaflet available from PPB.
- e) If the customer you are supplying consumes more electricity than you wheel in any half hour, they will have to pay the supply charges levied by their main supplier for the excess energy and Use of System charges. The main supplier may be an STS or NIE Supply.
- f) Customers under contract with exempt suppliers will also have a main supplier who will provide top up supplies when required. In addition all non-unit type charges ie standing charges, availability and reactive charges where appropriate to the customer tariff, will be levied on the main supplier at normal UOS rates.
- g) Ofreg determine and approve the rate for the spill price. Payment for generation spill units is made by PPB, who will inform you of the current spill price when you request permission to spill onto the grid. NIE PPB will advise you of any spill payments you are entitled to during the charging period and you must then invoice NIE PPB to receive payment for the amount due.

➤ **Extract - UoS Schedule E (wheeling) 2005/06**

(Ref: Northern Ireland Electricity plc, Statement of Charges for Use of the Northern Ireland Electricity plc, Electricity Transmission and Distribution, System by Authorised Persons 2005/06)

SCHEDULE E

USE OF SYSTEM CHARGES RELATING TO GENERATION CONNECTED TO THE DISTRIBUTION NETWORK

Use of System Charges for Standby

Customers who operate generators either to provide for their own needs or to export, may require NIE to provide distribution capacity to enable them to be supplied at times when the generators are not available. Normal use of system charges will apply in such circumstances.

Use of System Charges for Top-Up

Top-up supplies are required by premises with generation which is not capable of supplying the total site demand. Normal use of system charges apply in such circumstances.

Use of System Charges for Wheeling

Under the Electricity Class Exemptions from the Requirement for a Licence Order (NI) 1999, wheeling is a contractual arrangement between small embedded generators and remote sites whereby remote sites are deemed to have received generated units from the generators. In this contractual arrangement the small embedded generator undertakes to act as an exempt supplier and as such will be charged for the use of NIE's system in relation to units wheeled to his customers.

Real power flows do not follow the notional path between generators and remote sites. Customers with the same electrical characteristics connected to the same point in the network use the system identically irrespective of contractual arrangements with generators. However it is deemed that exported energy from embedded generators will be absorbed by the local distribution system and no use of the transmission system will be required. Hence exempt suppliers will be charged for the use of the distribution system only (i.e. no transmission element) in relation to units wheeled from the embedded generator to customer sites. Distribution charges for wheeled units are shown in table 1 below.

Customers under contract with exempt suppliers will also have a main supplier who will provide top-up supplies when required. All non-unit type charges i.e. standing

charges, availability and reactive charges where appropriate to the customer tariff, will be levied on the main supplier at normal tariff rates, in accordance with schedule A.

The wheeling arrangements managed by NIE are restricted to generator connections above 100kW. Embedded generators with connected capacity of 100kW or below may seek alternative arrangements with NIE PPB or a licenced supplier in Northern Ireland.

An administrative charge of £22 will be levied on exempt suppliers by NIE each month as a contribution towards the cost of supporting the wheeling arrangements.

Use of System Transmission Rebate

A transmission rebate is payable to NIE PPB and suppliers in respect of energy exported from contracted generators embedded in the NIE distribution system. This reflects the likelihood that all exported energy onto the NIE distribution system will be absorbed by the local distribution system and no use of the transmission system will be required. Table 2 details the credits in relation to generators exporting at different voltage levels.

Transmission rebate is credited to NIE PPB and suppliers who purchase the export from embedded generators to offset their use of NIE's transmission system. NIE PPB and suppliers must apply to NIE Network Pricing for transmission rebate in relation to nominated distribution generator sites. The generator connection must be below 10MW to be eligible for transmission rebate payment and the generator must not export onto the transmission system.

Wheeled units to which a distribution only charge has been applied will not be eligible for transmission credit as no transmission use of system charge has been applied in relation to their transport across NIE's network.

Notes:

If the generation is secure, e.g. by the provision of sufficient spare capacity to cover maintenance and failures, it may be possible to avoid some transmission and distribution costs. Where this is the case special arrangements will be offered.

Sites requiring top-up and standby will generally have a maximum import capacity in excess of their generation capacity. However for consistency with wheeling the standby charge relates to the lower of the site's maximum import capacity and generating capacity.

SCHEDULE E
Table 1a

Distribution UoS Charges in Respect of Wheeled Units							
QUARTERLY TARIFFS	Standard p/kWh	Day p/kWh	Night p/kWh	Heating p/kWh	Weekday p/kWh	Evening & W/end p/kWh	Off Peak p/kWh
T011	1.678						
T012		1.989	0.265				
T014		1.993	0.263	0.265			
T015		1.993	0.263	0.265			
T021	1.678						
T022		1.989	0.265				
T024		1.993	0.263	0.265			
T025		1.993	0.263	0.265			
T031	1.601						
T032		1.752	0.265				
T033					2.524	0.454	
T034		1.752	0.263	0.265			
T041							0.147
T042							0.147
T043							0.147
T044							0.147
Public Lighting	1.229						

Note.

1. The application of the above tariffs should align with the tariff eligibility defined in Schedule A.
2. The time periods relating to each of the charging bands above are consistent with the time periods for the relevant tariffs in Schedule A.
3. The wheeling arrangements managed by NIE are restricted to generator connections above 100kW.
4. A charge of £22 will be levied on exempt suppliers each month as a contribution towards the cost of managing the wheeling arrangements.

SCHEDULE E
Table 1b

Distribution UoS Charges in Respect of Wheeled Units							
STOD TARIFFS	Peak		Weekday		Day units April – Oct & March	Evening & Weekend	Night
	Dec/Jan p/kWh	Nov/Feb p/kWh	Dec/Jan p/kWh	Nov/Feb p/kWh	p/kWh	p/kWh	p/kWh
Medium Voltage							
T101	13.627	11.994	1.707	0.799	0.368	0.411	0.191
T103	12.836	11.932	1.261	0.557	0.280	0.338	0.173
T102	16.326	13.076	0.996	0.441	0.215	0.317	0.137
HV (6.6kV /11kV)							
T201	7.273	5.943	1.044	0.399	0.181	0.209	0.130
T203	11.360	9.313	1.009	0.447	0.187	0.206	0.106
T202	5.929	5.424	0.614	0.288	0.115	0.132	0.065

Note.

1. The application of the above tariffs should align with the tariff eligibility defined in Schedule A.
2. The time periods relating to each of the charging bands above are consistent with the time periods for the relevant tariffs in Schedule A.
3. The wheeling arrangements managed by NIE are restricted to generator connections above 100kW.
4. A charge of £22 will be levied on exempt suppliers each month as a contribution towards the cost of managing the wheeling arrangements.

SCHEDULE E
Table 2.

Rebates in Respect of Exported Units for Embedded Generation			
	<i>Medium Voltage less than 1000 volts p/kWh</i>	<i>6,600/11,000 volts p/kWh</i>	<i>33,000 volts p/kWh</i>
Peak units excluding the Christmas period (see Schedule I) for each kilowatt hour delivered between 1600 – 1900 hrs Monday - Friday inclusive			
December and January	5.946p	5.642p	5.499p
November and February	4.725p	4.466p	4.347p
April – October inclusive and March	0.081p	0.076p	0.074p
Weekday units excluding Public Holidays and Christmas period (see Schedule I) for each kilowatt hour delivered between 0800 to 2030 hrs excluding 1600 - 1900 hrs Monday - Friday inclusive			
December and January	0.741p	0.697p	0.678p
November and February	0.441p	0.413p	0.399p
April – October inclusive and March	0.073p	0.069p	0.067p
Evening and Weekend Units including weekday units during Public Holidays and Christmas period (see Schedule I) for each kilowatt hour delivered between 0800 hrs and 2230 hrs at weekend and for each kilowatt hour delivered between 2030 hrs and 2230 hrs on weekday evenings, throughout the year			
	0.089p	0.084p	0.082p
Night Units for each kilowatt hour delivered during the night between 2230 hrs and 0800 hrs, throughout the year			
	0.024p	0.024p	0.023p

Note.

NIE will pay transmission rebates in relation to exports from embedded generators if the following criteria are met,

1. the generator connected capacity is below 10MW, and
2. the generator does not export onto the transmission system.