Scottish and Southern Energy

Transmission Charging for Distributed Generation

David Densley

Regulation Manager

Agenda

- Capacity Issues
  - Obligations of DNO
  - System Control
- Charging Methodology
  - perverse incentives
- Possible solutions

Provision of Capacity (1)

- DNO Obligations
  - Offer terms to “accept into its distribution system at entry points… and/or distribute at exit points...”
  - Distribution system – system used for the distribution of electricity from grid supply points or generation sets or other entry points to the points of delivery to customers or authorised electricity operators or any transmission licensee

Provision of Capacity (2)

- Application Process
  - “Large” generators apply to NGET for Use of system
  - TO determines transmission work (if any) required before connection can be energised
  - DNO determines the work required on the distribution system and offers terms for distribution system work
- Note that this process does not depend on the type of agreement between EG and NGET (BEGA/BELLA)

Capacity Issues

- Formal Process only applies to “large” generators
  - refinements to planning process required
- Compliance with this process should establish equivalent rights to use the system

System Control

- Even with compliant system, tools are needed to manage power flow
- Balancing Mechanism is the current means
- DNO is not allowed to participate in the BM
- NGET therefore needs
  - Direct relationship with generator, or
  - Information through Supplier

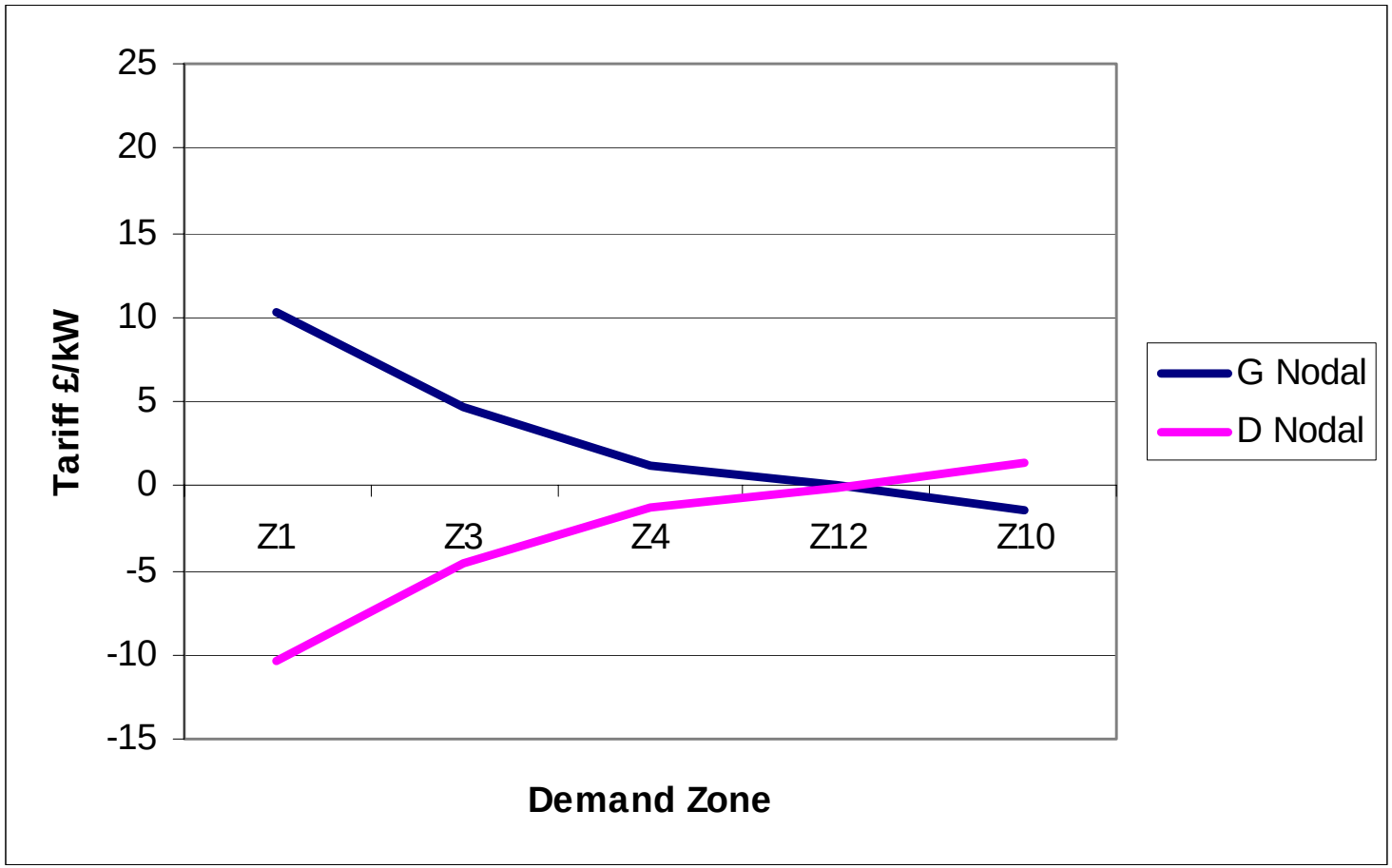
Charging methodology (1)

- Model gives very strong locational signals
  - incentives to avoid TNUoS
- Lack of consistency and symmetry
  - leads to perverse incentives & “embedded benefit”
  - the 99MW generator issue
- 132kV in Scotland treated like “supergrid”
  - not planned to supergrid security levels
  - charges based on secure network
  - potential for inefficient outcomes

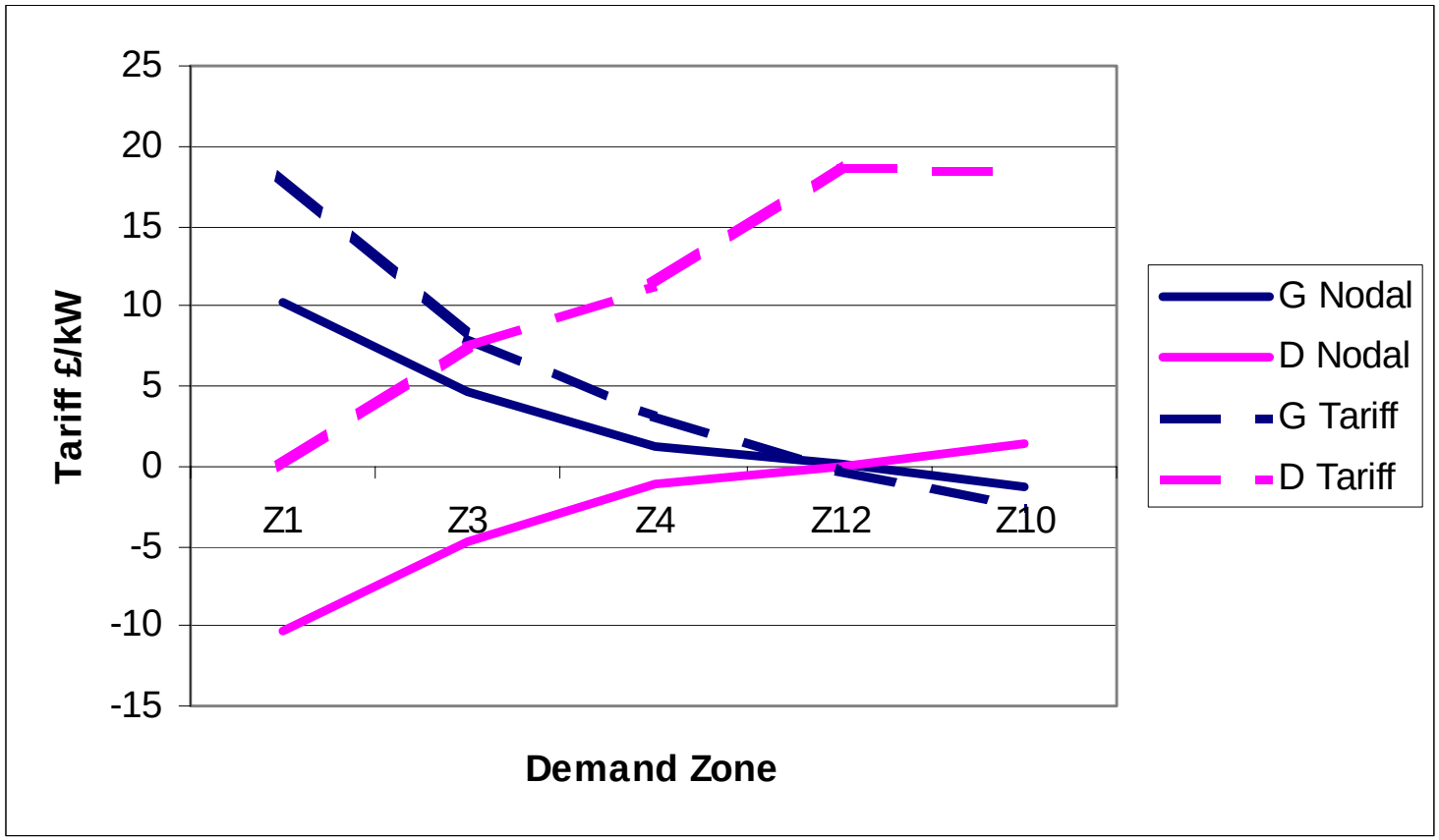
Charging methodology (2)

- Transport element gives equal and opposite nodal charges for demand and generation
  - embedded generation is the negative of the demand charge
  - therefore equal to the generation charge at nodal level
- Symmetry is lost by zonal grouping and residual element
  - leads to perverse incentives & “embedded benefit”

Transport Tariffs (nodal)



Final Tariffs



Proposals

- Formalise entry capacity at GSP - “CEC” not “TEC”
- Improved tools for managing network - constraint services agreements for non BMU generators?
- Charging
  - Harmonise 132kV charging
  - Determine de minimis level for TNUoS charging - apply to all generators?
  - Symmetrical capacity charging - residual in “commodity” charge?