Norsk RegnskapsStiftelse

International Accounting Standards Board
30 Cannon Street
London EC4M 6XH
UK

Cc: EFRAG

Oslo, 27 May 2013

Dear Sir/Madam

Request For Information, Rate Regulation

We welcome IASBs initiative to request information on rate-regulated activities.

Please find enclosed a presentation prepared by Runar Moseby in Statnett, describing rate regulation of Norwegian grid companies. Statnett is the Transmission System Operator (TSO) in Norway.

If you have any questions, please do not hesitate to contact Runar Moseby, Statnett, Tel. +47 481 02 769, or Didrik Thrane-Nielsen, member of the Technical Committee on IFRS of Norsk RegnskapsStiftelse, Tel. +47 952 60 437.

Yours faithfully,

Erlend Kvaal
Chairman of the Technical Committee on IFRS of Norsk RegnskapsStiftelse

Statnett

Regulation of grid companies in Norway

Response to:

Rate-regulated Activities

Request for Information and comment letters

The International Accounting Standards Board (IASB)

Two main models for regulation

- The choice of regulatory model must reflect the regulatory targets
  - There are pros and cons with every model of regulation

1. Rate of return – cost plus regulation
   - 1:1 between costs and revenues
   - Rate of return regulation withdraws monopoly profit
   - Give no incentives to cost efficiency
   - Investments will be too high or too low dependent on rate used for regulation

2. Incentive based
   - Not 1:1 between costs and revenues
   - Often revenue cap or price cap
   - Incentives to cut costs either by long periods between updates of revenue cap or by the use of efficiency analysis when determining revenue cap or a combination

Main principles of the Norwegian model

- Revenue cap
  - Cap is set on total revenues. Prices/tariffs is set by each company

- The revenue cap is cost based and covers:
  - Depreciations
  - Operations and maintenance
  - Value of energy losses
  - Standard return on regulatory asset base
  - System operations (only for Statnett – the system operator)

- Revenue cap is based 40% on actual costs and 60% on efficiency adjusted cost set by the regulator and based on benchmarking

- Revenue cap is quality adjusted based on outages

- Revenue cap is updated annually by the regulator

- Allowed revenue / tariff base equals revenue cap plus some pass through costs

- Tariffs have to be set so that actual revenues over some years equals allowed revenues. Actual revenues may differ from allowed revenues in each specific year

The main implications of the Norwegian model

- An average cost efficient company will earn a normal return on capital
  - If more efficient, the return will be higher than the cost of capital
  - If less efficient, the return will be lower than the cost of capital

- Return on capital is determined by a regulated interest rate
  - Based on real risk free rate of return of 2.5%, plus inflation and risk premium
  - At present about 7% nominal
  - Detailed formula at the end of the presentation

Benchmarking – efficiency analysis

- The regulator needs information about cost efficiency
- Benchmarking is necessary to avoid a too detailed regulation
  - Benchmarking: the comparison of the total cost level between grid companies
  - However, difficult to find an accurate benchmarking
- Statnett: At present 22 European TSOs are included in a regulatory benchmarking study initiated by European regulators
- Other grid companies: Annual efficiency analysis using a DEA model and based on reported costs and activities including all Norwegian companies

Regulatory Asset Base

- Only assets within the regulated activity are included
- Only assets in operations are included. Assets under construction are not included
- Working capital is included in RAB by 1% of fixed assets as a simplification
- Asset value for regulatory purposes equals book value from financial statement based on same accounting principles as in the financial statement
- Exception for the above, is for regulated assets acquired from other regulated grid companies. Then the asset value for regulatory purposes for the acquiring company will be the same as the asset value for regulatory purposes for the seller no matter the transaction price for those assets.
- The principles described in the bullet points above, also apply for depreciation to be included in the cost base for the revenue cap

Regulation of security of supply

- Regulation of security of supply is partially incentive based
- Revenue cap is adjusted for power outages
  - The regulator sets a standardized value for outages that are compared to actual value of outages
  - The standardized value is based on the historical average of Statnetts outages
    - High relative level of actual outages, reduces revenue cap
    - Low relative level of actual outages, increases revenue cap
- Incentive to increase security of supply, but only if it is not too expensive
- Outages are calculated as lost load times length of outage

From revenue cap to tariffs

Revenue cap
+ Property tax
+ ITC (inter transit compensation)
+ Other pass through costs
= Allowed revenue / tariff base

Actual revenues:

- Fixed tariffs – consumption
- Fixed tariffs – production
- Variable energy based tariff – consumption and production
- Congestion rent from price differences between price areas within Norway or other countries
- Minor other elements

Allowed revenues vs. actual revenues

- Annually the regulator compares allowed revenues against actual revenues.
  - If actual revenues exceed allowed revenues, Norwegian grid companies must reduce future tariffs accordingly
  - If actual revenues are below allowed revenues, Norwegian grid companies may increase future tariffs accordingly
- When adjusting future tariffs based on any difference between actual and allowed revenues, an interest compensation has to be included
- With present accounting regulations, the obligation to reduce future tariffs if actual revenues have exceeded allowed revenues, do not meet the criteria to be included in the balance sheet as debt, and vica versa.

Summary – simplified formula for the revenue cap (Statnett)

R= 0,4(C+SO) + 0,6(c+so) + 0,6(q-Q)+ P*losses(MWh)

C = costs (cost of capital, depreciations and operations and maintenence costs)

Q = value of outages / cost of energy not supplied

SO = costs for system operations

Capital letters denotes actual values and small-sized letters denotes values standardized by the regulator

P = Price for losses

Statnett's Revenue cap (R) – Detailed formula

$$R_t = 0{,}4 \cdot (K_{t-2}) + 0{,}6 \cdot (eff * K_{t-2}) + p_t \cdot NT_{t-2} +$$
$$0{,}6 \cdot (KILE* - KILE_t) + 0{,}4 \cdot SDK_t + 0{,}6 \cdot SDK* + EK_t + TK_t + JI_t$$

- K_{t-2} — Actual cost year t-2
- *eff* — Efficiency score
- NT_{t-2} — Actual transmission loss year t-2
- p_t — Regulated electricity price year t
- SDK_t — Cost of system operations year t
- KILE — Quality adjustment based on outages
- EK_t — Property tax year t
- TK_t — Transit costs year t
- JI — Adjustment for difference in depreciation and capital cost between year t and year t-2. Implies that investments are included in revenue cap from the year the asset was put into operations
- * — Indicates norm

Detailed formula Cost base - Statnett

$$K_{t-2} = \frac{KPI_t}{KPI_{t-2}} \cdot DV_{t-2} + AVS_{t-2} + AKG_{t-2} \cdot r_t$$

- DV_{t-2} OPEX year t-2
- KPI Consumer price index
- $AVS_{t\ -2}$ Depreciation year t-2
- AKG_{t-2} Regulatory Asset Base year t-2
- r_t Regulated rate of return

Revenue cap – other grid companies (R)

$$R_t = 0{,}4 \cdot \left(K_{t-2}\right) + 0{,}6 \cdot \left(K^*_{t-2}\right) + EK_t + JI_t$$

$$K_{t-2} = \frac{KPI_t}{KPI_{t-2}} \cdot DV_{t-2} + AVS_{t-2} + AKG_{t-2} \cdot r_t + p_t \cdot NT_{t-2} + KILE_{t-2}$$

- K_{t-2} — Actual cost year t-2
- K^*_{t-2} — Cost norm based on efficiency analysis
- NT_{t-2} — Actual transmission loss year t-2
- p_t — Regulated electricity price year t
- KILE — Quality adjustment based on outages
- EK_t — Property tax year t
- JI — Adjustment for difference in depreciation and capital cost between year t and year t-2.
- DV_{t-2} — OPEX year t-2
- KPI — Consumer price index
- AVS_{t-2} — Depreciation year t-2
- AKG_{t-2} — Regulatory Asset Base year t-2
- r_t — Regulated rate of return

Detailed formula - Regulated rate of return

$$r = (1 - G) \times \left[\frac{Rf + Infl + \beta_e \times MP}{1 - s}\right] + G \times (Swap + KP)$$

- **G**: Debt ratio – fixed at 60%
- **Rf**: Fixed real risk free rate of return - 2.5%
- **Infl**: Inflation: Average of two recent years actual inflation and two next years expected inflation
- **βe**: Equity Beta – fixed at 0,875
- **MP**: Market risk premium – fixed at 5%
- **Swap:** 5 year swap rate
- **KP**: Credit risk premium for Norwegian electricity sector

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