REGULATORY INVESTMENT INCENTIVES

- how regulators can promote infrastructure development -

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ECRB ad-hoc Task Force
"REGULATORY INVESTMENT INCENTIVES"

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ECRB report "Risk Related Regulatory Incentives for PECI" - objectives

Take inventory of possible risks of PECI.

Identify a common methodology to assess investment risks.

Identify best-practices for regulatory incentives.

Make recommendations for NRA and ECRB

PECI RISK IDENTIFICATION AND ASSESSMENT

Risk evaluation in EnC CP – status quo

- **Systematic (undiversifiable) risks compensated via NRA price controls**
- **Portfolio based risk evaluation vs. project-specific risk evaluation**
- **Cost of capital calculation:**
  - CAPM (≈50%)
  - Benchmarking
  - Assumptions / common sense
- **High divergence of WACC values**
  - Electricity TSOs: 0.67% - 8.95%
  - Natural gas TSOs: 1.8% - 12.23%

Common methodology for risk assessment - approach

- Transitional methodology
- Portfolio based risk assessment

TEN-E IMPLEMENTATION IN THE ENERGY COMMUNITY

- ACER Methodology
- Project based risk assessment

Transitional methodology # 1

Availability of information on project risks

- **TSOs to provide information on their risk exposure to NRA**
- **TYNDP**
  - Embed risk management in planning procedures
  - Establish mandatory TYNDP content and criteria for approval

Transitional methodology # 2

Identification of the nature of risks

- **Cost overruns**
  - Costs higher then envisaged/ approved by NRA
- **Time overruns**
  - Translate into late cost compensation
- **Stranded assets**
  - Demand unexpectedly declines
  - Advance capacity challenge
- **Insufficient regulatory remuneration**
  - costs not recognized by the NRA as efficient
- **Liquidity risk**
  - Delayed coverage of costs

Transitional methodology # 3

Risk mitigation measures by TSOs

- **TSO**
  - To demonstrate that risk management mechanisms are in place
- **NRA**
  - To assess the way how controllable risks are facilitated by TSOs

Transitional methodology # 4

Assessment of systematic risk and definition of cost of capital

- **Keep an eye on the systematic risks**
  - NRA to revisit/ develop and publish WACC calculation methodologies (e.g. CAPM)
  - Check whether market value weights for equity and debts are being used
  - Check whether reasonable expectations of equity and debt providers are recognized
  - *Ensure clear distinction btw. systematic risks (recovered via the cost of capital) and non-systematic risks (may be a trigger for incentives)*

Transitional methodology # 5

Risk mitigation measures already applied by NRAs

- **Check whether certain risks are already addressed via price controls**
  - High powered vs. low powered price regulation models
  - Treatment of uncertainties (correction factors)
  - Treatment of RAB (asset valuation, including/ excluding working capital, including/ excluding CWIP…)
  - Treatment of depreciation (straight line, accelerated, asset lifetime)
  - Treatment of QoS…

REGULATORY INVESTMENT INCENTIVES

Reg. incentives in EnC CP #1

Risk mitigation through the overall national regulatory framework

	ELECTRICITY			NATURAL GAS		
	RoR	Rev. cap	Price cap	RoR	Rev. cap	Price cap
Albania			+		n/a	
BiH	+			+		
Croatia	+				+	
FYROM		+			+	
Georgia				+		
Kosovo*		+			n/a	
Moldova		+			+	
MNE		+			n/a	
Serbia	+			+		
Ukraine	+			+		

Reg. incentives in EnC CP #2

Risk mitigation through specific regulatory measures

- **No specific incentives tailored for PECI**
- **Incentives targeting a portfolio of investments**
  - Monetary reward/ penalty schemes (FYROM: higher RoR for new investmetns)
  - Rules for anticipatory investments (FYROM, Moldova: including investment costs in RAB if included in approved investment plan)
  - Early recognition of costs (MNE electricity transmission and FYROM gas transmission: CWIP included in RAB
  - Negative incentives: FYROM
  - Capacity extension agreements: FYROM

The X – factor

- **Are the regulators part of the problem?**
- **Perception of NRA performance**
  - EURELECTRIC: unstable and unpredictable regulation- *“the single most important risk”*
  - ECS: *“threatened independence of the NRA”*
  - EnC Strategy: (lack of) *“cost reflectivity of tariffs- key investment barrier”*

A TOOLBOX FOR REGULATORY INVESTMENT INCENTIVES

Rules for anticipatory investment

Embedding investment incentives in price controls

- **Including investment costs in RAB**
  - Full or partial reimbursement
  - Socializing the risks between network users
- **Alternative depreciation methods**
  - Annuity depreciation
  - Production unit depreciation
- **Carry- forward mechanisms (smoothing)**
- **Deep/ semi- deep connection charges**

Network users' ex-ante financial commitment

Ensuring cost reimbursement from network users irrespectively if the capacity is used after construction

- **Deposits**
  - UoS charges deducted from deposit after construction
- **Ex-ante capacity commitment agreements**

Recognition of efficiently incurred costs before project start- up

Ensuring coverage of up-front costs before the project starts creating cash- flows

- **Full or partial recognition of:**
  - CWIP
  - Other pre- commercial costs
- **Complemented with safeguards that the costs were incurred prudently**
- **Equalizing risks during the construction and operation phases**

Safeguards for recognition of efficiently incurred costs

Mitigating possible over- or under-recovery due to discrepancies between allowed and actual costs

- **Correction factors**
  - Addresses differences btw. allowed and actual revenues
  - Addition/ subtraction element in the MAR formula
- **Regulatory accounts**
  - Addresses differences btw. allowed and actual revenues due to uncertainties in quantity forecasts
  - Differences are annually recorded in the regulatory account (result calculated in the last year)
  - UoS charges adjusted in the next regulatory period
  - Strong variations in UoS charges avoided

Penalty – reward schemes

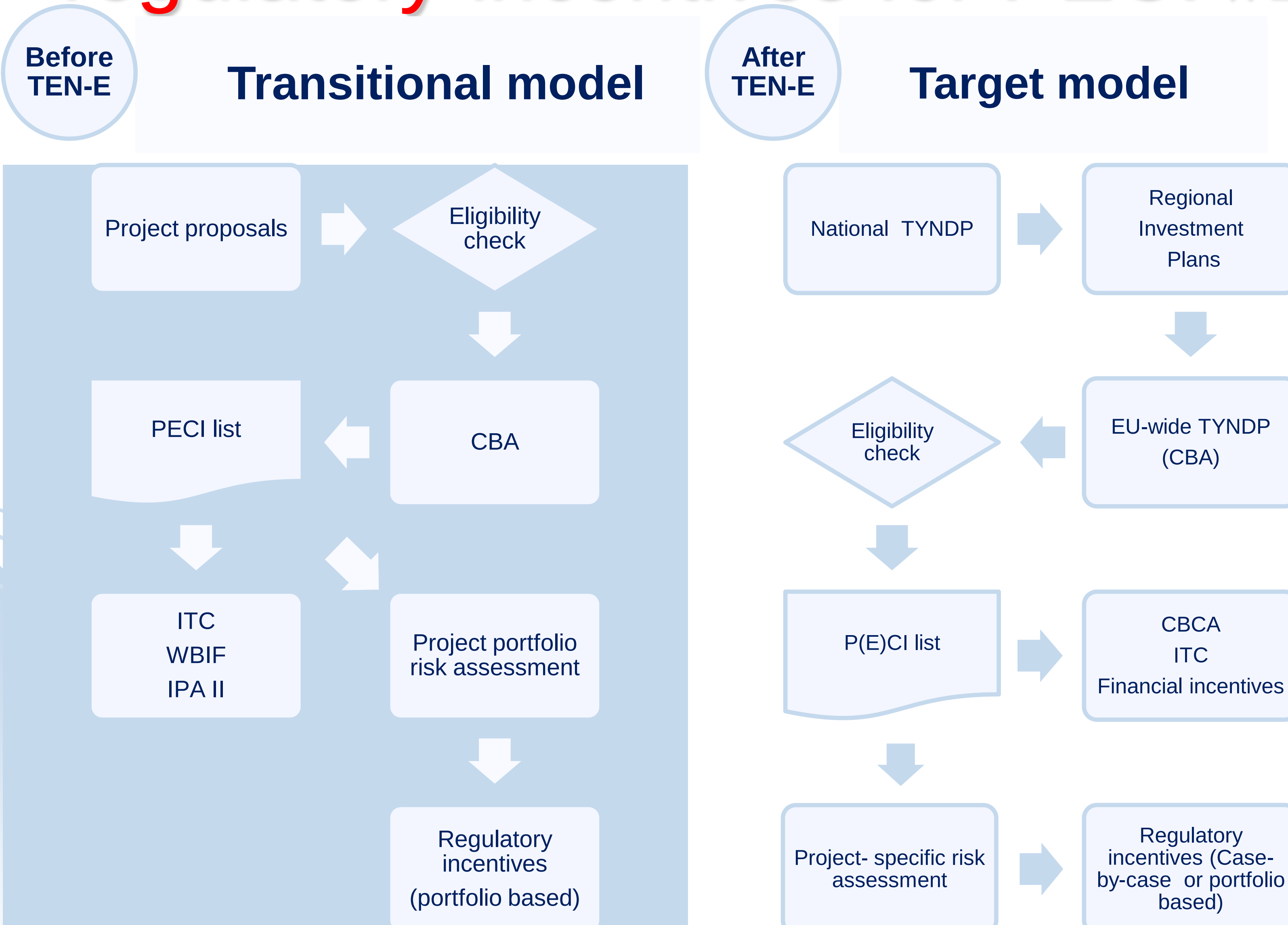
Rules influencing TSOs revenues

- **RoR uplifts (“equity return adders)**
  - Increasing RoE
  - Addresses regulatory and liquidity risks
  - *Incentive to overinvest*
  - *Incentive may be granted for projects that would be implemented without RoR uplift*
- **Negative incentives**
  - Obliging TSOs to use congestion revenues for tariff reduction if not invested in infrastructure

Applying the toolbox- introducing regulatory incentives for PECI #1

- **Incentives on case-by-case bases**
  - Targeted to PECI
  - Based on project specific risk profile
  - Difficult before enabling “visibility” of PECI in national legal framework (implementing TEN-E)
- **Incentives for a group of projects**
  - Addressing risks of a portfolio of eligible projects (incl. PECI)
- **Incentives for all investments in TSO portfolio**
  - Addressing average total risk of the whole portfolio of projects
  - In practice: review of the price controls

Applying the toolbox- introducing regulatory incentives for PECI #2



Risk related incentives

Risk of cost overruns	Correction factors
Risk of time overruns	The rules for anticipatory investments
	Correction factors
Risk of stranded assets	Including anticipatory investments in RAB
	Alternative depreciation methods
	Smoothing
	Deep connection charges
Risks related to recognition of efficiently incurred costs	Regulatory accounts
	Correction factors
	The rules for anticipatory investment
Liquidity risk	The rules for anticipatory investments
	Early recognition of efficiently incurred costs
	Regulatory accounts
	RoR uplifts

ECRB RECOMMENDATIONS

Wrap-up: ECRB recommendations #1

- **Identify nationally specific barriers for infrastructure investment**
  - Assess the weight of particular barriers (e.g. permitting, regulatory treatment, finances)
  - Do we need additional regulatory incentives at all?
- **Establish an effective investment planning mechanism (in case of EnC: TYNDP)**
  - Clear regulatory requirements on the TYNDP contents: scenarios, risk analysis, cost benefit analysis etc.
  - Established criteria for regulatory approval

Wrap-up: ECRB recommendations #2

- **Review the price controls:**
  - Whether applicable price controls already comply with best regulatory practice (cost- reflective tariffs, technical and allocative efficiency, balance btw. high and low power price controls etc.)
  - Is CAPM or other method for WACC calculation clearly defined and published
  - Are inputs for WACC calculation properly reflecting (market) values of equity and debt
- **Risk assessment**
  - Using a transitional methodology before TEN-E transposition in the EnC, and ACER methodology afterwards

Wrap-up: ECRB recommendations #3

- **Regulatory investment incentives**
  - NRA are advised to use at least portfolio based incentives before TEN-E implementation in EnC, where applicable
  - Check whether considered incentives are targeting risks already addressed within the current price controls
  - Clear and proportional relation between risks and incentives needs to be established
  - Introducing incentives is meaningful only if the project would not take place without them (to be demonstrated by the project promoters)

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