



Market-based investment incentives for gas infrastructure

Gocha Chitidze

GNERC



Outline



- History
- Incentive Mechanisms
- Investment appraisal rules

History



Before 2019

Regulatory period	1 year
Capex	Cost Plus
Opex	Cost Plus
CNL	Act < Norm
SQC	x

After 2019

Regulatory period	3-5 years
Capex	Hybrid
Opex	Incentive based (CPI - X)
CNL	Act < Norm
SQC	SAIFI

Incentive Mechanisms (Capex)

- Commission approves investment plan for the regulatory period
- Tariff (RAB) includes planned/approved investments
- Utility is getting return on the planned assets starting from the year of commissioning

$$\textit{Cost plus} _ RAB_{t+1} = RAB_{old(t+1)} + Inv_t$$

$$\textit{Hybrid} _ RAB_{t+1} = RAB_{old(t+1)} + (Inv_{t+1} - D_{Inv(t+1)})$$

Incentive Mechanisms (Capex)



Investment 100
 Dep 10%
 WACC 10%

Year	0	1	2	3	4	5	6	7	8	9	10
Inv	100										

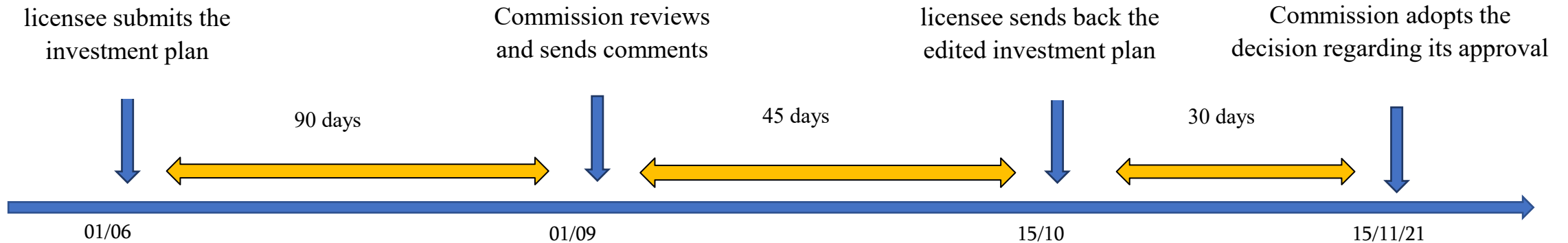
Cost plus

RAB	-	100	90	80	70	60	50	40	30	20	10	
Dep	-	10	10	10	10	10	10	10	10	10	10	
Ret	-	10	9	8	7	6	5	4	3	2	1	
Cash flow	-	20	19	18	17	16	15	14	13	12	11	
PV		18	16	14	12	10	8	7	6	5	4	100

Hybrid

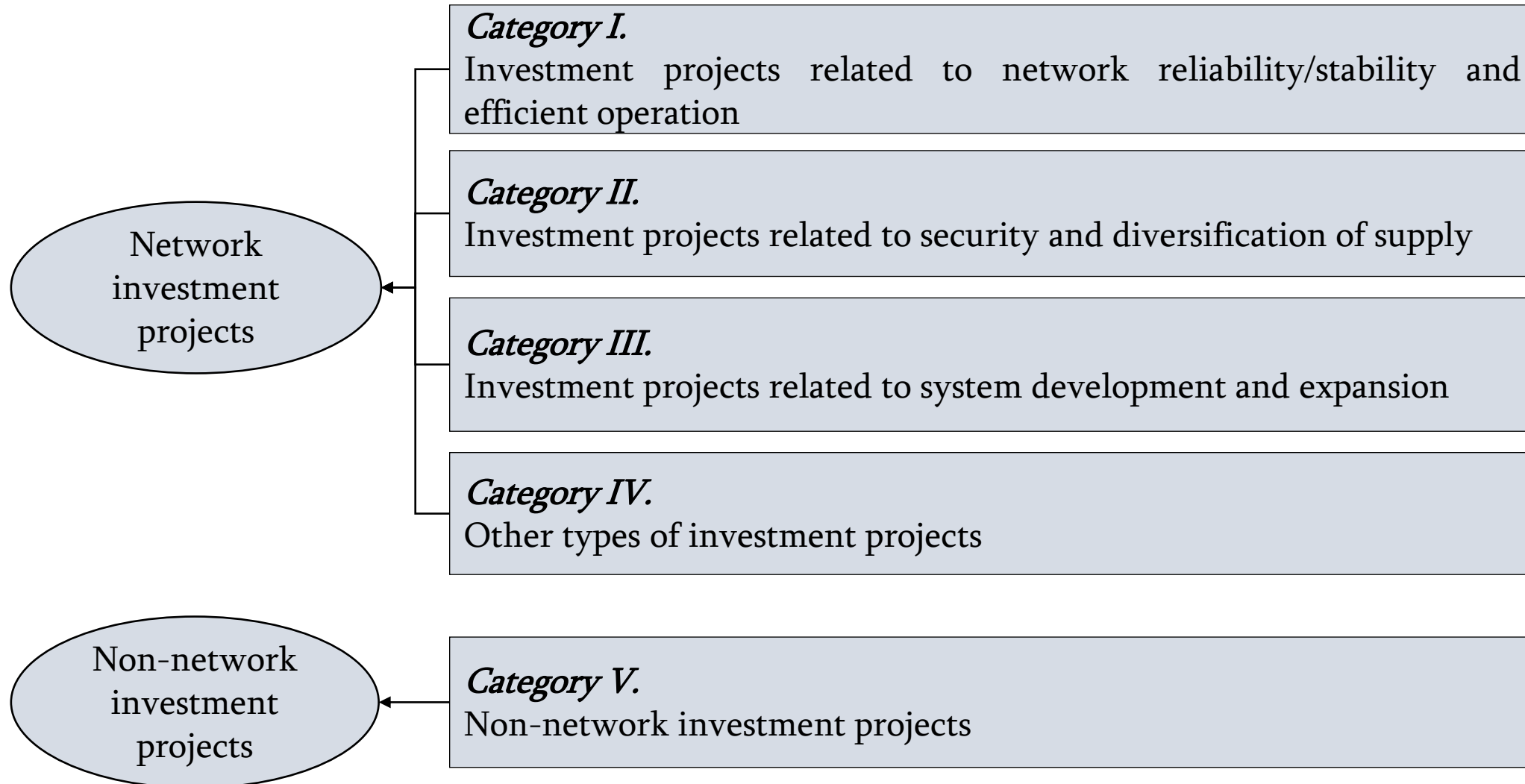
RAB	90	80	70	60	50	40	30	20	10	-	-	
Dep	10	10	10	10	10	10	10	10	10	10	-	
Ret	9	8	7	6	5	4	3	2	1	-	-	
Cash flow	19	18	17	16	15	14	13	12	11	10	-	
PV	19	16	14	12	10	9	7	6	5	4	0	103

Submission procedure



- Network investment plan is submitted to the Commission annually, no later than June 1;
- Non-network type investment projects, shall be reflected in the investment plan submitted in the tariff calculation year.

Classification of Investment Projects



Evaluation of the Investment Projects



Methodologies:

- Financial analysis → FNPV
- Economic analysis → ENPV

Technical Expediency Criteria:

- Interruption of supply
- Volume of natural gas not supplied
- Losses
- Quality

Evaluation of the Investment Projects



Category I. Investment projects related to network reliability/stability and efficient operation

- Technical expediency criteria, if the project cost < 5mln (for distribution < 1mln) GEL*
- Economic analysis, if the project cost > 5mln (for distribution > 1mln) GEL**
- Cost reasonableness
- Permits necessary for the first year's investment projects (if applicable)
- Evidence of availability of financial sources to the licensee
- Impact on the tariff, if the project cost > 5mln (for distribution > 1mln) GEL***

** Technical expediency criteria shall be prepared for the investment projects with the total cost of less than 5mln GEL.*

*** Investment project shall be acceptable, if the ENPV>0.*

**** Total impact of implementation of all investment projects of the given category upon the tariff shall also be assessed (impact on the tariff is evaluated by the Commission).*

Evaluation of the Investment Projects



Category II. Investment projects related to safety and diversification of supply

- Financial analysis
- Economic analysis if $FNPV < 0$ *
- Cost reasonableness
- Permits necessary for the first year's investment projects (if applicable)
- Evidence of availability of financial sources to the licensee
- Impact on the tariff, if the project cost > 5 mln GEL**

* Investment project shall be acceptable, if the $ENPV > 0$.

** Total impact of implementation of all investment projects of the given category upon the tariff shall also be assessed (impact on the tariff is evaluated by the Commission).

Evaluation of the Investment Projects



Category III. Investment projects related to system development and expansion

- Financial analysis*
- Cost reasonableness
- Permits necessary for the first year's investment projects (if applicable)
- Evidence of availability of financial sources to the licensee
- Impact on the tariff, if the project cost > 5mln GEL**

** Investment project shall be acceptable, if the $FNPV > 0$. Those investment projects, for which the $FNPV < 0$, but the investment is secured through funding from a third party, shall be accepted.*

*** Total impact of implementation of all investment projects of the given category upon the tariff shall also be assessed (impact on the tariff is evaluated by the Commission).*

Evaluation of the Investment Projects



Category IV. Other types of investment projects

- Technical expediency criteria, if the project cost < 5mln GEL*
- Economic analysis, if the project cost > 5mln GEL
- Cost reasonableness
- Permits necessary for the first year's investment projects (if applicable)
- Evidence of availability of financial sources to the licensee
- Impact on the tariff, if the project cost > 5mln GEL**

* *Technical expediency criteria shall be prepared for the investment projects with the total cost of less than 5mln GEL.*

** *Total impact of implementation of all investment projects of the given category upon the tariff shall also be assessed (impact on the tariff is evaluated by the Commission).*

Investment appraisal rules

- Avoid overinvestment
- More service & performance oriented investments
- Increased access to the financial resources
- More predictable regulatory framework
- Increased transparency



**THANK YOU
FOR YOUR ATTENTION!**

g.chitidze@gnerc.org