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# **3<sup>rd</sup> Technical Workshop: Gas Market Design and Natural Gas Transmission Grid Codes**

## **EU NRAs methodologies for evaluation of Gas Investments**

Evangelos Penglis

Partner, VIS Economic & Energy Consultants

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## Why review NRA methodologies for projects and risks evaluation?

EU Regulation 347/2013 requirements

Survey findings

Ten-Year Development Plan obligation

Methodology of investments evaluation



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## Why review NRA methodologies for projects and risks evaluation?

- A desk review was conducted of methodologies for the evaluation of gas investment plans and constituent projects, published by a sample (15) EU MS NRAs, in response to the requirements of the EU Regulation 347/2013
- The rationale for carrying out this survey was:
  - to assess if the published methodologies of the EU NRAs surveyed are characterized by a common approach, or include common aspects, for the review and approval of TYNDPs and constituent projects
  - To assess how detailed the published methodologies are and whether they provide TSOs with a clear indication of what is appraised and how
  - Ultimately, to draw useful lessons for the methodologies and guidelines included in the Investment Guide prepared by NARUC consultants, so as to ensure value addition to Energy Community NRAs



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## EU Regulation 347/2013 requirements

- Article 13(6) of the EU Regulation 347/2013 requires each EU MS NRA to publish a **methodology and the criteria used to evaluate investments in electricity and gas infrastructure projects, and the higher risks incurred by them**
- Energy Community countries have adopted this Regulation and have to develop their own methodologies (deadline 1-1-2017)
- NRAs' published methodologies, in response to the requirements of Regulation 347/2013, differ widely from country to country, in scope and depth of coverage



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## EU Regulation 347/2013 requirements

- The methodology required by Regulation 347/2013 is not focused on PCIs.
- Most EU NRAs published methodologies refer to the evaluation of TYNDPs and national infrastructure projects.
- However, concerning risk evaluation, published methodologies focus on PCI projects



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## Survey findings

We analyzed whether the published methodologies met the following criteria:

1. Reference to TSO obligation for submission of TYNDP to NRA
2. Inclusion of Methodology for evaluation of investment projects
3. Inclusion of Requirement for CBAs in projects evaluation (not only for PCIs)
4. Reference to NRA role in monitoring Investment Plans' Implementation
5. Reference to existing risk Mitigation Measures for investment projects within the respective NRA's gas regulatory framework
6. Listing of criteria for risk evaluation for PCIs
7. Inclusion of Risk Evaluation Method for PCIs





## Survey findings

EU MS	Reference to TSO obligation for submission of TYNDP to NRA	Methodology for evaluation of investment projects	Requirement for CBAs in projects evaluation (not only for PCIs)	Reference to NRA role in monitoring Investment Plans' Implementation	Reference to existing risk Mitigation Measures for investment projects within the gas regulatory framework	Listing of criteria for risk evaluation for PCIs	Risk Evaluation Method for PCIs
Austria	✓	✓	x	x	✓	✓	✓
Bulgaria	✓	✓	x	✓	✓	✓	✓
Croatia	✓	✓	x	x	✓	✓	✓
Cyprus	✓	✓?	x	x	✓?	✓	✓
Czech Republic	✓	✓?	x	x	x	✓	✓
Greece	✓	✓	x	✓	✓	x	x
Italy	x	x	x	x	✓	✓	✓
Latvia	x	✓	x	x	✓?	✓	✓
Lithuania	✓	✓	✓	x	✓	x	x
Slovakia	x	✓	x	x	x	x	✓?
Slovenia	✓	✓	✓	✓	✓?	x	x
Romania	✓	x	x	x	✓	✓	✓
Luxembourg	✓	✓	✓	x	✓	x	x
Estonia	x	x	x	x	x	✓	✓
Netherlands	x	x	x	x	x	✓	✓
Portugal	✓	✓?	x	x	✓	x	x

Source: VIS analysis based on published relevant NRAs methodologies

Key: ✓ = methodology satisfying criterion  
 x = methodology not satisfying criterion  
 ? = partly satisfying criterion i.e. broad reference is made to the criterion but no details provided)



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## Survey findings

- Our review concluded that in 5 out of the 15 NRAs' methodologies surveyed, there is no reference to the TSO obligation for submission of Ten Year Development Plan (TYNDP) to NRA
- 4 out 15 of NRAs' published methodologies that were surveyed **do not include a methodology for evaluation of investment projects.** In most remaining countries, the evaluation methodologies for investment appraisal and/or regulatory review of investment plans **do not follow a common methodological framework: there are differences in the evaluation criteria used**
- **Only 3 MS methodologies explicitly refer to using cost-benefit analysis (CBA) for economic evaluation of national investment projects;** most countries refer to the need for projects to be 'economically efficient' and refer to CBA only for PCIs



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## Survey findings

- Additionally, in only 3 out of the 15 methodologies there is a **reference to the NRA role in monitoring Investment Plans' Implementation**
- In the majority of the methodologies surveyed (12 out of 15) there is full description of the existing risk **Mitigation Measures for investment projects within the gas regulatory framework pertaining to each MS**
- In the case of PCIs, 10 out of 15 MS methodologies include **specific criteria and methodology for evaluating risks for PCIs**, to be used when considering whether to grant incentives to project promoters in order to overcome/mitigate these risks



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## Ten-Year Development Plan obligation

- Most methodologies reviewed require the TSO to submit annually the gas TYNDP to the regulator for approval. Prior to submitting the TYNDP, the TSO is obliged to consult with all relevant market participants
- The methodologies include some very general requirements for the TSO, when elaborating the TYNDP:
  - make reasonable predictions about the evolution of the production, supply, consumption and exchanges with other countries
  - Include efficient measures to ensure system adequacy and security of supply of the infrastructure
  - ensure technical and economic feasibility of the investments involved
  - guarantee consistency with the Community-wide network development plan and the regional investment plan



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## The case of Slovenia – Three Year Development Plan obligation

- Slovenia has published a regulation that lists the detailed requirements for the 3 year investment plan (which is part of the TYNDP):
  - Investments to be categorized as follows:
    - **by infrastructure typology** (e.g., gas pipelines)
    - **by type/objective** (e.g., investments for the extension of the transmission system)
    - **according to impact** (e.g., national, cross-border)
    - **according to implementation stage** (e.g., investments under construction that have obtained FID)
  - the starting points for the preparation of the investment plan, the purpose and objectives of the investments



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## The case of Slovenia – Three Year Development Plan obligation

- Additionally, the three-year investment plan is required to include:
  - the criteria for determining the investment priority order
  - list of investments in priority order
  - investments in progress



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## Methodology of investments evaluation

- In most cases, regulators quote very general criteria for approving investment plans; investments must be proven to be:
  - Necessary for technical reasons
  - Adequate
  - Economically efficient
- However, it is not specified how (e.g. with financial or cost-benefit analysis) these criteria can be applied by the TSOs, and how the regulators are to examine whether the investments included in the TYNDP meet these criteria
- There are only a few cases, like Slovenia, Lithuania and Luxembourg that require specific-project CBAs to be used for evaluation of the investments



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## Methodology of investments evaluation

In the case of Slovenia, the methodological basis for the assessment of (the 3 year) investment plan by the regulator comprises more specific criteria:

- **Availability of sources of financing:** the regulator shall determine whether the total value of the investments is consistent with the available sources of funding
- **Financial criteria:** the regulator shall assess the financial viability of the investments by conducting financial analysis for investments of value over 5 million €
- **Economic criteria:** the regulator shall assess the economic viability of the investments by conducting economic analysis for investments of value that exceeds 25 million €



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## Methodology of investments evaluation

- **Security of supply criteria:** the regulator assesses this criterion when the indicator of the financial net present value (FNPV) is negative and the eligibility of the investment is demonstrated by a significant increase in the security of supply
- **Development criteria:** the investment plan complies to the development criteria if the following conditions are met:
  - all investments in the 3 year plan are in line with the TYNDP, and the results of the public consultation
  - the impact of new national or cross border investments on existing infrastructure utilization, is assessed as "neutral" or "positive"
  - cross-border investments are consistent with investments in the EU wide TYNDP



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## Methodology of investments evaluation

In spite of more specific criteria used in Slovenia, there is nevertheless no specific methodology or guidelines concerning the application of the above criteria - e.g., economic analysis methodology etc.



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## Summary and Conclusions

- Some countries have not published methodologies regarding investment appraisal, and those that have do not follow a common methodological framework and use general criteria for project evaluation.
- Most countries' methodologies contain general principles and not detailed instructions - i.e., they do not specify how evaluation criteria can be applied in practice by the TSOs, and how the regulators are to examine whether the investments included in the TYNDP meet these criteria.
- Methodologies for conducting CBA are not published even in countries like Slovenia that provide more detailed evaluation criteria and approach.



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## Summary and Conclusions

- In this context, the USAID-supported Guide for TYNDP Investments appraisal under development by NARUC consultants, aims to cover an apparent gap by providing a structured and comprehensive methodological framework and toolbox that each Regulator can practically apply to develop their national methodology for evaluation of TYNDPs.