Storage Capacity Prospects in Italy

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Gas Storage System

Italy dependent from import gas of approx. 90%

Current Scenario (ref. 2011/2012)
• 10 Operative - 4 Authorized Onshore Concessions
  Working gas: 15,620 MSm³ - Withdrawal: 275 MSm³/d

Improving energy supply independence, security and flexibility of system through increase storage working gas and withdrawal capacity

Operating storage plants optimization and new storage plants

Forecasted Scenario by 2020
• 21 Operative Onshore Concessions
• Approx. 25,000 MSm³ (+52% with ref. to 2012) expected by 2020
• Approx. 408 MSm³/d (+43% with ref. to 2012) expected by 2020
Offshore Storage - A New Possible Opportunity for Italian Storage


- In Italy there are many offshore exploiting reservoirs

- Use offshore gas reservoirs with a suitable capacity and at an advanced stage of exploitation.

- First time in Italy and in the Mediterranean Sea
**OFFSHORE STORAGE – PRELIMINARY ANALYSIS**

**Criteria for the conversion into a storage**
- presence of a trap with a cap rock that presents specific features ensuring a watertight seal to the overlying formations
- high percentage of produced reserves
- storage efficiency [working gas/ (working gas + cushion gas)] greater than 30%
- suitable values of porosity and permeability

**Law References**
- Decreto Ministeriale del 27 marzo 2001
- Decreto Direttoriale del 04 febbraio 2011

Identified a set of potential suitable reservoirs
Estimated a potential increase of approx. 50% with reference to 2012 and of approx. 30% with reference to 2020, of storage capacity

One reservoir suitable for feasibility studies

- Central Adriatic Sea
- Advanced exploitation phase
- Appropriate range of permeability and porosity
- GOIP approx. 5000 MSm³
- Produced reserves approx 4000 MSm³ in 2012
# Pro, Cons and Solutions for Offshore Storage

<table>
<thead>
<tr>
<th>Pro</th>
<th>Offshore activities impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantial increase of working gas and withdrawal capacity</td>
<td>More complex working enviornment</td>
</tr>
<tr>
<td>Easier way to reach a larger public acceptance compared with new onshore storage plants</td>
<td>More complex and expensive techniques</td>
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<tr>
<td>Different approach for economic and financial evaluation of offshore production projects</td>
<td>Higher enviromental risks</td>
</tr>
</tbody>
</table>

## Solutions

- Technical progress and new technologies
- EU Offshore Safety Proposal