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Year 2011

DEPARTMENT FOR ENERGY

General Directorate for
Mineral Resources and Energy



Ministry of Economic Development

Report 2011

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INTRODUCTION

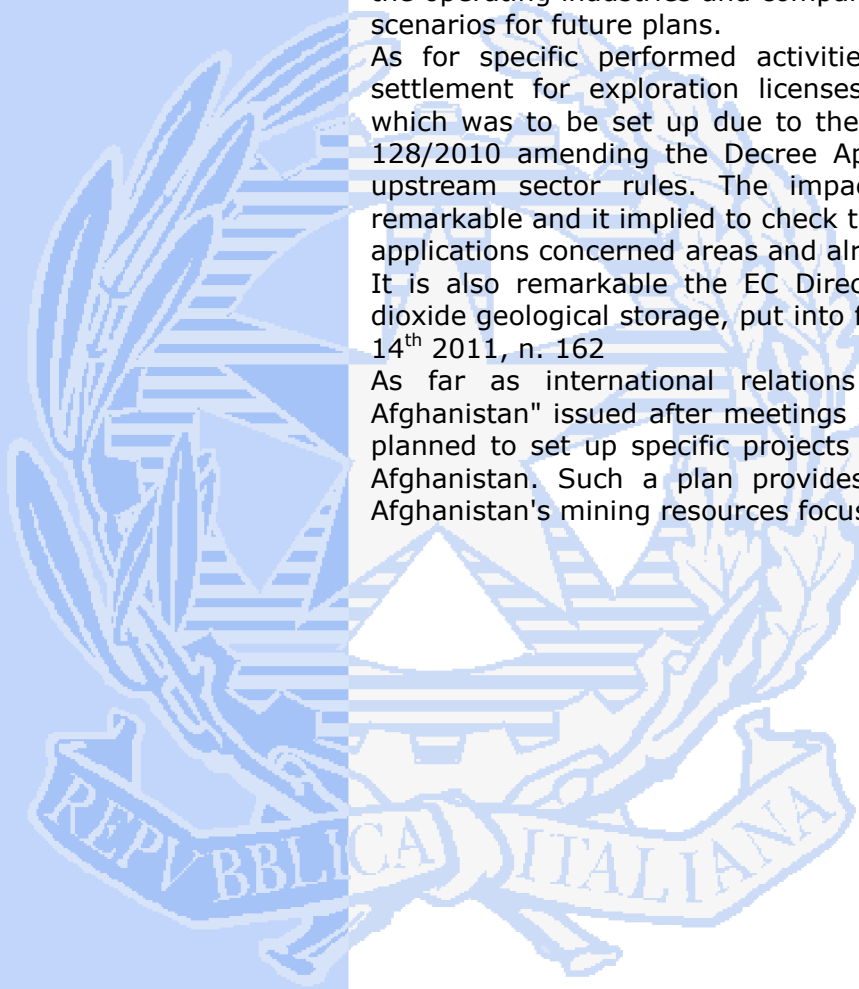
The General Directorate for Mineral Resources and Energy provides again for year 2011, its annual report on activities carried out within its institutional tasks ranging from authorization, prospecting activities management and control, research, hydrocarbons production and natural gas storage, international relations with the administrations of other states in the field of mineral resources.

The Annual Report is intended to provide summarized data that characterized the year 2011 and that express, mainly in comparison with previous years, the operating industries and companies' liveliness level as well as hypothetical scenarios for future plans.

As for specific performed activities, it is reported the regulations frame settlement for exploration licenses and hydrocarbons production licenses, which was to be set up due to the entry into force of Legislative Decree n. 128/2010 amending the Decree April 3rd, 2006, n. 152, so as to consider upstream sector rules. The impact of this regulatory activity has been remarkable and it implied to check the compliance with such a decree both for applications concerned areas and already operating titles.

It is also remarkable the EC Directive 2009/31 carrying out about carbon dioxide geological storage, put into force by the Legislative Decree September 14th 2011, n. 162

As far as international relations are concerned there is the "Project Afghanistan" issued after meetings with the most relevant Afghan authorities planned to set up specific projects for industrial planning between Italy and Afghanistan. Such a plan provides to the operators a set of data about Afghanistan's mining resources focusing chiefly on Herat province.



1. Organization

The General Directorate for Mineral Resources and Energy carries out planning, authorization, management and control of prospecting activities, research, exploitation and storage of mineral resources, especially hydrocarbons and concerned offshore plants; bilateral, multilateral and international European agreements setting up for exploration and exploitation of mining resources in international waters; promotion and counseling for hydrocarbons and mining resources development in developing countries aimed at supplying policies and national competitiveness; technologies for carbon dioxide CCS; technical rules for exploitation, transport and storage plants; mining safety except for mining safety checking and workplaces carried out by local Offices such as Bologna, Rome and Naples and test laboratories in Rome.

Further to D.M. May 7th 2009 "Ministry of Economic Development not-general Managerial Offices" have been set up tasks for the eight Divisions that compose the General Directorate for Mineral Resources and Energy. In detail the organization is as follows:

DIVISIONS

I Division – Mining National Office for Hydrocarbons and Georesources (UNMIG) – UNMIG Direction and technical coordination, BUIG, cartography

II Division – Bologna UNMIG Section

III Division – Rome UNMIG Section

IV Division – Naples UNMIG Section

V Division – UNMIG's Laboratories for tests and analysis in mining and energetic sector, explosives for use in mining sector

VI Division – Hydrocarbons and geothermic resources exploration and exploitation

VII Division – Natural gas storage, CCS

VIII Division – Relationship with Regions, local authorities, international and European Unity's bodies; Royalties

Territory competences widen both all over continental Italy where mining titles release is carried out together with regional authorities and marine areas under government jurisdiction.

In the Sicilian Region, the exploration and production of hydrocarbons is a matter of URIG (Regional Office for Hydrocarbons and Geothermal Energy). The body responsible for the Region of Sardinia is the Service Industry Mines Department.

2. Activities

During 2011 sector rules were fully carried out and updated according to European ruling about CCS as follows:

- By Ministerial Decree of 21 January 2011 putting into force, entitled "Conditions for granting the concession of underground natural gas storage and related disciplinary type" as well as February 4, 2011

decree entitled *"Operational procedures for the implementation of the Ministerial Decree of 21 January 2011 and methods for the storage and control activities, pursuant to Article 13, paragraph 4 of the Ministerial Decree of January 21, 2011"*, it was fulfilled the regulating managing plan for gas storage, in order to harmonize sector provisions owing to subsequent amendments, most recently ruled by law n. 99/09 ("Development Act").

- By Ministerial decree of 4 March 2011 putting into force and entitled *"Regulations for the type of exploration permits and concessions for research and production of oil and gas on land, sea and the continental shelf"* as well as the decree of the March 22, 2011 *"Operational procedures for the implementation of Ministerial Decree 4 March 2011, and methods of conducting prospecting, exploration and production of oil and gas and attached controls in accordance with Article 15, paragraph 5 of the Ministerial Decree of March 4, 2011"*, were updated the sector regulations as far as hydrocarbons exploration and production is concerned to take account of the limits introduced by Legislative Decree 29 June 2010, n. 128 in the environment. Such decrees replace the Ministerial Decree of 26 April 2010.
- By the entry into force of Legislative Decree 14 September 2011, n. 162 *"Implementation of Directive 2009/31/EC on the geological storage of carbon dioxide and amending Directives 85/337/EEC, 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006 / 12/CE, 2008/1/EC and Regulation (EC) n. 1013/2006"* ended the path of European Directive on CO2 storage. The standard covers all aspects related to storage of carbon dioxide, giving operators the opportunity to invest in a path of innovative technology directed to environment protection and supported by European Authorities.

The Directorate took part in international activities on behalf of its concerned tasks within the Ministry competences.

- Between 8 and 12 April 2011, a delegation including the Minister, representatives of Confindustria and about 30 leading Italian companies in the energy sector, logistics and infrastructure, mining and trade, among them Eni, Enel and Enea, Trevi Group Fantini, Maffei Group Minerals, Iatt, assomarmomacchine, AI Engineering, as well as institutions for internationalization such as Ice, Simest and Sace went to Afghanistan. The aim was to set up concrete projects and industrial cooperation between Italy and it led to the signing an industrial memorandum for industrial strategies for future Italian investments. The areas of greatest interest are those of hydrocarbons and mineral resources, including oil and gas, power generation, infrastructure, industry of fine Afghan marble, which already established relationships with Italian companies in various sectors such as textile, agriculture and food industry, precious stones and pipeline installation. The Directorate has set up a special section on its website called "[Project Afghanistan](#)" where important information and useful references for further information can be found.
- In April 2011 was presented at the headquarters of the Ministry the Raw Materials Workshop, founded on the initiative of ANIM - National Association of Mining Engineers, Assomineraria - Italian Mining Association for Mining and Oil Industry, AITEC - Italian Association of Technical Economic Concrete, CRIET - Center for Interuniversity Research in Land Economics, GEAM - Earth Resources and Environment Association and the Department of Energy, Directorate General for Energy and Mineral Resources of the Ministry of Economic Development, whose goal is to encourage research for sustainable

development in mining sector in order to exploit the mineral resources for social and economic development of territories. The aims and objectives for a mining community were firstly highlighted: search for solutions to improve mining activities in the framework of a sustainable development, cooperation with the "Raw Materials Initiative" of the European Union, data collection on production of mining sector, set up of strategic minerals for security for raw materials supply.

The first plan for such a workshop is related to a program of development of significant mineral potential of Afghanistan, chiefly Herat Region, as a quick result of the mission of the Minister on April 12th, 2011 by signing an important agreement for joint development in Afghanistan operations in mining, oil, facilities and trade sectors.

3. The CIRM

For ITS jurisdiction on the institutional Activities General Directorate Shall request the Commission for Hydrocarbons and Mineral Resources' (CIRM) opinion. Such a Commission, established by a President of the Republic Decree on May 14th, 2007, no. 78, is the technical-advisory committee for Permits and Concessions (CIRM A) release, safety of working (CIRM B) and royalties (CIRM C).

During the year 2011, the Commission met twice as for section "A" examining 20 applications related to mining titles and twice too as for "A" and "B" in joint session. It dealt with various issues, including the allotment to another holder of marginal fields, the evolution of safety for offshore installations at EU level, Department proposals to encourage mining activities development to ensure raw materials provision. The "C" section met once for 2009 royalties and for reducing royalties unit value pursuant to Article 19, paragraph 7 of Leg. N. 625/1996, for the year 2010.

4. The website

Data disclosure is done through the website <http://unmig.sviluppoeconomico.gov.it>, which, along with information on administrative processes under way, provides a set of data of general interest such as hydrocarbons production, royalties paid by companies to the Government, regions and municipalities, reflection and refraction seismic surveys, wells and oil-rigs list, as well as a space dedicated to national and local legislation.

Most relevant data (production, licenses, projects) related to the geographical area or with the local marine area of reference are supervised by "Local Monitoring" and "Sea monitoring" set up on a local scale. It was also renewed the field map with the publication of the new licenses maps and facilities on a local scale.

During the year 2011 geothermal sector increased more, adding an [experimental plant](#) section, besides of [geothermal resources](#) exploration and production data provided by the concerned local authorities.

Natural gas storage was implemented too by an explicative note "[What is storage?](#)" about main technical information on natural gas storage, storage site's plants, fields characteristics and how to get a concession.

On the website is published the Official Bulletin of Hydrocarbons and Geothermal Resources (BUIG), established by Law 11.01.1957, n. 6, the official monthly report that enlists new titles release, new operating titles and besides news and announcements related to the business of exploration and production of oil and geothermal resources.

Access statistics for 2011 indicate a number of visited pages for an amount of 1,018,802 and a number of unique hits of 171,081, by an average of nearly 400 accesses.



HYDROCARBONS AND GEOTHERMAL RESOURCES

5. Hydrocarbons exploring activities

Exploration and exploitation drilling operations

In the year 2011 drilling activity affected 37 stations, for an amount of 55,810 meters drilled. Only one of the drills is an exploring activity, while the remaining refer to 4 drills for exploitation, 23 workover and 9 wells for storage activities.

From this year on drilling wells details by a specific table also shows 2011 data.

Explorations and findings

In 2011 there were no findings in exploration, as the only exploratory drilling activity is not completed. Data combined with the work over records in that year, shows how operators is almost exclusively aimed at implementation of known fields, rather than looking for new resources.

Lack of exploration activities with new plants to ensure good production levels, revenues taxes and employment is due to difficult procedure to get permits. [Concessions](#) and [permits](#) situation is constantly updated on the website.

Mining rights

At December 31st 2011 there are 121 operating exploration permits (out of which 96 are onshore and 25 offshore) and 199 exploitation licenses (out of which 133 onshore and 66 offshore).

A mining title area is defined according to criteria established by law, usually a few square kilometers. It is an area where only the owner can operate and is much higher than that actually occupied by plants (well areas, power plants and processing facilities), usually a few hectares.

Territories falling under a mining right are therefore not affected by exploration and extraction except for small areas with granted permission where take place operations.

In order to make evident the activities reduced impact over di whole title area, on the website were published, under "[Cartografia](#)", the maps of mineral rights and equipment, where with a detailed description are listed the actual owners and operators in the area.

6. Hydrocarbons for production - Royalties

Production

In 2011 hydrocarbons production in Italy had a slight increase over the previous year reaching up to +5% for gas and +4% for oil, which confirms a reversal trend started in 2010 compared with a oil decrease of 26% in

the period 2004-2008 and gas decrease of 53% during the years 2000-2009.

Gas production

In 2011 natural gas production was 8.34 billion Sm³. Specific tables for details of additional production on regional scale can be found; it points at products historical trend, with the progressive exhaustion of the old gas fields, not sufficiently compensated by a relevant increase in the Marche Region with a new license start up.

Oil production

In 2011 oil production was 5.28 million tons.

Regions which product more oil are Basilicata with 71% and Sicily with 12%. Marine areas "B" and "C" wholly represent a further significant share of 12% of national production.

Estimated reserves

Reserve data takes into account only international classification. Furthermore, were added data with information on barreled oil reserve in addition to tons data and with a summary table of total gas and oil tons of oil equivalent in Italy.

The relationship between the only proved reserves and yearly average production of last five years, underlines a development divided into 7.2 years for gas and 14 for oil. All that without regarding to any revaluations or investments that may consider part of probable and possible reserves as proved ones.

It is significant that approximately 58% of total national gas is located offshore, while for as far oil, 87% is located onshore mainly in Southern Italy.

Royalties

On the Ministry website are available data about [Royalties paid in 2011](#) and in past years since 2008.

The art. 45 of Law 23 July 2009 Act, n. 99 introduced a 3% increase in the production rate of that the holder of concessions is growing annually, pursuant to art. 19, paragraph 1, of Legislative Decree n. 625/1996. The amounts corresponding to the increased tax rate value are to be intended as a pre-ordered reduction of the filling stations fuel price for residents in areas concerned by liquid and gas hydrocarbons extraction and regasification activity.

By the Interministerial decree November 12th, 2010 "*Implementation of the provisions of art. Law 45 of July 23, 2009, n. 99, establishing a fund for filling stations fuel price reduction in the regions concerned by oil and gas extraction*", it is given effect to the provision of law. The decree follows two main ways for the use of the contribution: by amounts "per capita" over than 30 € on annual basis, calculated on comparison between regional revenue and number of older residents provided with driving license, it is expected a "hydrocarbons bonus" issue as electronic paper form to each beneficiary. It is an Italian Post Office Spa prepaid

card on behalf of the Ministry of Economic Development for fuel purchase from enabled distributors.

If the "per capita" amount is less than 30 € the contribution is transferred to the concerned regions to be allocated to provinces and municipalities within the mining activity.

For payments in the year 2011, regarding hydrocarbons production for year 2010, the "Hydrocarbons Bonus" was issued to beneficiaries in the Basilicata Region; moreover during the year started new procedures for electronic cards requesting and delivery. For the year 2011 were issued about 290,000 chip cards as a contributive amount a little bit more than 100 €.

Another important innovation in royalties has occurred with the enactment of the Decree of the Minister of Economic Development August 6th 2010, modified by Decree July 22nd 2011, that changed the way by which natural gas producers sell some product rates earmarked to the State by an agreement of Manager of Energy Markets Co. (GME). Procedures for rates negotiation are carried out by auction sale. The law provides that a holder has anyway to pay to Government fiscal system a minimum value equivalent to the QE (*energy rate for gas raw material cost*). Adoption of this provision implies a minimum value that goes beyond any downward fluctuations in the offer market and which against the above provisions. Rates long period sales until March of following year entails that payments refer to two different financial years. So there is a delay in publishing payments complete data on the website.

7. Gas storage

Capacity 2011

Currently active storage fields in Italy are 10, all located Of Them by exhausted gas fields, while there are 14 operating Concessions.

The *working-gas*¹ at December 31st, equal to 14.79 billion standard cubic meters (MSm³), out of which 5100 MSm³ for strategic storage.

The total storage capacity, which takes account of the cushion gas, is equal to 25,352 MSm³.

It is remarkable that "Collalto" plant widening works came to an end.

The "Cornegliano" (1,300 MSm³ working gas) concession was released on March 15th, 2011 to Ital Gas Storage Company Ltd.

Storage sites	Working gas ¹ [MSm ³]
<i>Brugherio</i>	330
<i>Cellino</i>	118
<i>Collalto</i>	440
<i>Cortemaggiore</i>	959
<i>Fiume Treste</i>	3.406
<i>Minerbio</i>	2.658
<i>Ripalta</i>	2.016
<i>Sabbioncello</i>	939
<i>Sernano</i>	2.244
<i>Settala</i>	1.680
Total storage sites	14.790

¹ including the strategic storage and pseudo-working gas

New plants

S.Potito & Cotignola" concession plants installing is still in progress and it was released in 2009 (915 MSm³ working gas project).

Are ongoing processes for the issuing of "Cugno Le Macine" "Serra Pizzuta" concessions releasing procedures are going on too. At the end of December 2011, Basilicata Region gave its approval for Cugno Le Macine site, while as for Serra Pizzuta did not yet (both agreements were required by the Ministry in November 2009).

Overpressure

At moment overpressure activity (107%) is permitted only in "Settala" (500 MSm³ of increase of working gas) concession, following testing and EIA phases.

During the year 2011 has been authorized an experimental overpressure equal to 107% for "Minerbio" concession.

For "Sergnano" concession's release, equal to 105%, its procedure is still in progress

Legislative Decree n. 130/10

By Ministerial Decree 31st January 2011 the Ministry of Economic Development accepted a Plan presented by the Company in compliance with Eni under Article 5 paragraph 4, of Legislative Decree 130/10, for increasing a new storage capacity. The updated Plan, launched in September 2011, will be object of a special ministerial decree.

Updated list of natural gas storage capacity is going on. It was supplied by operating Companies in compliance with Article 4, paragraphs 1 and 4 of this Decree. 130/10.

8. CO₂ storage

CCS Directive Acceptance

CO₂ carbon capture and storage is considered a strategic element for European energy policy as a transitional technology That will help the climate change According to the Preliminary Estimates 20% reduction in Emissions of greenhouse effect gases Within 2020.

European Directive's putting into effect was enforced by Legislative Decree of 14 September 2011, n. 162 gave to operators a ruling set in order to carry out plans scheduled by EEPR.

The Directive 2009/31/EC aims to Establish a common European legal Setting On stairs for a safe geological storage of carbon dioxide, with the aim of contributing to the Fight Against Climate Change.

The Directive provides:

- a Competent Authority for choice
- storage areas
- database storage activity
- procedures for granting permission storage activity and any possible previous survey for site suitability
- well shut off and closing down obligations, Financial Guarantees
- Financial Guarantees checking operators
- monitoring and inspections

It was possible to set up a draft decree according to specified criteria by elements provided by the Law 4th June 2010, n. 96 - Community Act 2009. The Legislative Decree on September 14th 2011, n. 162, provides that storage activities are carried out by exploration licenses and storage concessions. At the end of such an activity is forecast a storage site's closing authorization and responsibility will be handed from companies over Government authorities.

That Decree partly concerns following ministerial decrees to be issued between 6 and 24 months after decree publication. In particular, among the map outstanding aspects there is the location of CO₂ storage's suitable areas, handing responsibility terms and conditions over the Ministry of Economic Development after closing stage, the definition of criteria by which technical assessment will be done on documentation presented for exploration and storage applications releasing and moreover a rate setting/financial guarantees set up owed by storage permit holder. For such a reason, concerned ministries created different working groups, each with specific priorities for the preparation of the texts of the mentioned decrees and are coordinating activities.

9. Geothermal resources

Exploration permits checking and administrative functions over geothermal resources exploitation concessions onshore were delegated to regions as an issue of L. Decree 31st March 1998, n. 112.

Legislative decree n. 22 of 11th February 2010 a "Geothermal resources exploration and production ruling reorganization according to Article 27, paragraph 28 of Law 23rd July 2009, No. 99" were simplified procedures for low enthalpy and an exposure to a competitive system .

Legislative Decree on March 3rd 2011, n. 28, "Implementation of 2009/28/EC renewable sources' energy promotion with changes and following abrogation of Directives 2001/77/EC and 2003/30/EC" has made changes to the legislative decree February 11th 2010, n. 22, about geothermal resources exploration and production, adopting experimentation aimed at the development of new geothermal power plants with reduced environmental impact.

Geothermal fluids at medium and high enthalpy aimed at this type of testing are considered as national interest and mineral rights are issued by the Ministry of Economic Development, agreeing with the Ministry of the Environment, Land and Sea and concerned Region. The experimental plants are characterized by zero-emission, nominal installed power not exceeding 5 MW for each plant and reinjection of geothermal fluid in the same original formations. Besides may also be granted mining rights for a total allowable effort not exceeding 50 MW.

Consequently, the Department, with July 1st 2011 Directive gave operating instructions for a first implementation of that legislation providing a put into force of such an act; besides it was foreseen that the issuing procedure for a permit for an experimental plant, the applicant must have a previous knowledge of geothermal data needed to start it during the period of permit validity. In the year 2011 were received the first applications that anyway did not have not yet saturated the maximum power available and for them took place a preliminary investigation.

10. Southern Italy methane distribution network

Such an industry had its origins in the early eighties as an issue of repeated oil crises that led the Italian Government to strengthen the natural gas network distribution in Southern Italy (gas distribution networks were concentrated mainly in Northern Italy) so as to reduce petroleum products dependence.

The directives issued by the National Energy Plan (PEN) in the years 1978-1980 were enforced by November 28th 1980 No 784 Act, which provides for financial contributions for natural gas distribution networks and a technical and financial assistance to municipalities or local bodies concerned.

The "Cassa per il Mezzogiorno" (National Board established in the early '50s to encourage and promote Southern Italy's development) gave financial contributions for technical development and after its closing, the Ministry of Industry (now the Ministry of Economic Development) acquired its tasks.

Southern Italy methane distribution network program fostered by the CIPE resolution of February 11th 1988 that was to be implemented in a three-year period has still to be completed.

Between the first phase and the General Program until December 31st 2011, 1876 have been funded in many municipalities, out of which 671 were funded by August 7th, 1997, No 266 Act which the Ministry of Economic Development dealt with.

The total expenditure to a large extent already supported amounts to around two billion euro.

The program will last by 10 with the final implementation of methane supply projects for a lot of Southern Italy municipalities who have not get yet any benefits from that the law due to lack of funds in this sector since 2005.

For program final conclusion it is assessed that nearly € 20.0 million are expected to be available by future financial laws.

During 2011 took place tests for 101 natural gas distribution operations, bringing the whole amount of operations up to 478. It was possible to examine Procida (NA), Sicignano degli Alburni (SA), Petina (SA), Parolise (AV) e Sorbo Serpico (AV) applications for funding thanks to new funds.

Also during 2011 went on the projects implementation for 99 municipalities belonging to the Calabrian basins called CL 01, CL 02, CL 05, CL 08 and CL 22.

ENVIRONMENT AND SAFETY

Divisions II, III and IV are the Department offices with technical and administrative management, control and supervision tasks of the hydrocarbons exploration and exploitation activities.

The territorial jurisdiction is divided into:

- II Division – Section U.N.M.I.G. of Bologna: Piedmont, Liguria, Lombardy, Veneto, Friuli-Venezia Giulia, Emilia-Romagna and its territorial sea and continental shelf
- III Divisione – Section U.N.M.I.G. of Rome: Tuscany, Umbria, Marche, Lazio, Abruzzo and Molise and its territorial sea and continental shelf
- IV Divisione – Section U.N.M.I.G. of Naples: Campania, Basilicata, Puglia and Calabria and its territorial sea and continental shelf.

As part of the work spent in the year 2011, we summarize some data:

<i>Activities inspection</i>	<i>Exploitation verification</i>	<i>Checks</i>	<i>Inspections on drilling wells sites</i>
	79	3.766	150

Exploitation verification relate to hydrocarbons got by licenses, while under the entry checks are included both raising equipment and hearthing and under pressure. Finally the Inspections carried out on drilling wells sites.

<i>Permissions</i>	<i>Geophysical activities</i>	<i>Authorization for new wells drilling and mining closing down</i>	<i>Beginning of work authorizations</i>	<i>Final work authorizations</i>
	18	121	157	85

Permissions provide an offices activity's technical-administrative survey even though not exhaustive, as well as for reported inspection activity data. Authorization for new wells drilling, mining closing down implies more aspects ranging from operations good planning to assessment of any specific requirement. The beginning of work authorizations is directly related to final tests carried out together with other technical bodies (Fire Brigade, Port authorities).

A. Accidents

In hydrocarbons exploration, production and storage, during year 2011 there were a total of 28 accidents, none of them fatal. 12 out of them are classified as severe (with a prognosis of more than 30 days) and 16 non-serious.

Drilling	1995	2008	2009	2010	2011
Meters drilled	137.565	70.080	80.521	56.640	55.810
Accidents	121	25	24	12	13
Aggregate index (accidents/meters drilled)	0,00088	0,00036	0,00030	0,00021	0,00023
Variation respect to 1995		-59%	-66%	-76%	-74%

Production	1995	2008	2009	2010	2011
Gas (billion of St. cubic meters)	20,4	9,1	7,9	7,9	8,3
Oil (millions of ton)	5,2	5,2	4,5	5,1	5,3
Total (millions of toe) (*)	21,520	12,480	10,820	11,420	11,940
Accidents	125	40	27	35	15
Aggregate index (accidents/toe)	5,81	3,21	2,50	3,06	1,26
Variation respect to 1995		-45%	-57%	-47%	-78%

(*) 1 Mm³ di gas = 800 toe

B. Chemical and environmental surveys

The Directorate Fifth Division is responsible for chemical industry in particular in environmental energy and mining. It is equipped with modern laboratories and chemical analysis and it is able to perform and conduct experimental research in the field of elaborate campaigns for soil, water and air samples taking.

Activities in detail are as follows:

- mining of minerals and rocks classification in relation to national and regional rules;
- analysis of liquid and gaseous emissions from extraction equipment and / or treatment of energy minerals;
- natural gas quality checking;
- chemical and mineralogical analysis of: industrial minerals (marl, feldspar, limestone, clay used in ceramic industry, bleaching clay, bentonite, salt), intermediate processing and industrial waste, asbestos-containing materials.
- analysis of soils and waters for the purpose of monitoring compliance with limits set out by Decree 152/2006 and its modifications, for metals and inorganic products;
- harmful substances emission tests according to the regulations on waste, industrial waste and inert materials;
- surveys into areas near to industrial and mining sites for monitoring the environmental impacts;
- study of the historical materials used in construction to ensure the proper restoration of the buildings (mortar, plaster, stone);
- scientific collaborations with public institutions for the study of materials and experimental processes (universities, other ministries, research institutes).

Energetic sector: in this sector went on the campaign to control the quality of the natural gas produced and/or stored in Italy. Sampling and analysis of natural gas were carried out (determination of percentage composition of the gas calorific value, Wobbe index, density relative) in the following sites

- Central gas treatment:
 - "Falconara", ENI S.p.A.;
 - "Fano", ENI S.p.A.;
 - "Rubicone", ENI S.p.A.;

- "Pineto", Adriatica Idrocarburi S.p.A.;
- "San Benedetto", Adriatica Idrocarburi S.p.A.;
- "Grottamare", Adriatica Idrocarburi S.p.A.;
- "San Giorgio a Mare", Edison S.p.A.;
- "Passatempo", Gas Plus Italiana S.p.A.;
- "Poggiofiorito", Gas Plus Italiana S.p.A.;
- "Piane di Larino", Edison S.p.A.;
- "Spilamberto", Padana Energia S.p.A.;
- "Quarto", Padana Energia S.p.A.;
- "Castellaro", Edison S.p.A.;
- "Cassiano", Edison S.p.A.;
- Central storage:
 - "Sabbioncello", Stogit S.p.A.;
 - "Minerbio", Stogit S.p.A.

Chemical-environmental sector: in this sector too air emissions monitoring and hydrocarbons gathering and treatment went on. Waste-to-energy plants chimneys checks adjoining to industrial plants were performed for extracted fluids merging into the oil center "Val d'Agri", the gas treatment plants of "Casalborsetti" and "Ravenna Mare" by Eni Company. It was also issued an opinion about the emissions authorization into the atmosphere in the gas plant being built "Capparuccia" by Adriatica Ltd. Hydrocarbons Company.

Mineral resources sector: in the sector the Fifth Division has particular experience in many scientific equipment devoted to mineralogical-petrographic studies. Samples from 7 mining areas were analyzed for granting as minerals belonging to the former first class.

Finally, it is remarkable the Fifth Division study and analysis activity for the University of Bologna - Department of Archaeology of Ravenna to support the operations of some archaeological excavations in Oman.

C. Explosives

The Fifth Division manages the explosives, accessories and exploders list, approved for use in mining sector under the Ministerial Decree 21st April 1979.

The Division prepares all requests for new products suitability acknowledgement, it analyzes their technical characteristics in order to give them a ministerial certification required to ensure them a mining use.

For the year 2011 explosives, blasting accessories and lighting means approved list for national territory consists of:

- explosive products: n. 278 products;
- blasting accessories: n. 178 products;
- lighting devices: no. 46 products.

In 2011, the Fifth Division has carried out an examination of technical papers for inclusion among the new products approved for the following substances and/or accessories:

- n. 6 explosive products;
- n. 1 accessory detonating;
- n. 2 lighting devices.

The [list of explosives, blasting accessories and lighting means approved for using on national territory](#) is published on the Directorate website.

	Solid samples for analysis issuing mining concessions	Environmental analysis (i.e. determination of asbestos fibers, NOx etc.)	Gas quality analysis
Number of samples	12	5	16
Number of determinations	120	-	208
Number of sampling campaigns	-	4	16
Number of analysis reports	8	5	16



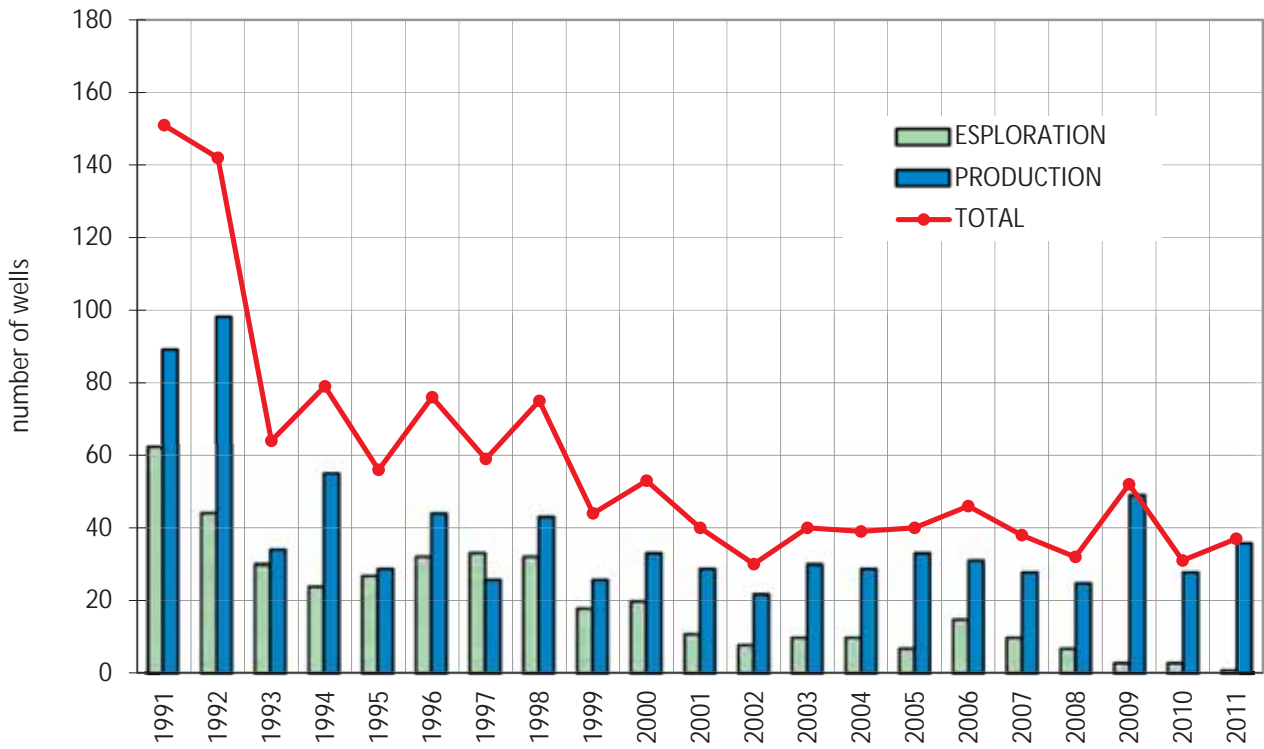
Drilling activities - years 1991-2011

YEAR	EXPLORATION							PRODUCTION & OTHER PURPOSES							OVERALL		
	ONSHORE		OFFSHORE		TOTAL			ONSHORE		OFFSHORE		TOTAL			Numb of wells	Meters drilled	Average wells depth
	Numb of wells	Meters drilled	Numb of wells	Meters drilled	Numb of wells	Meters drilled	Average wells depth	Numb of wells	Meters drilled	Numb of wells	Meters drilled	Average wells depth					
1991	36	83.547	26	52.094	62	135.641	2.188	35	97.161	54	187.105	89	284.266	3.194	151	419.907	2.781
1992	29	79.363	15	39.718	44	119.081	2.706	25	57.642	73	222.934	98	280.576	2.863	142	399.657	2.814
1993	24	72.426	6	10.123	30	82.549	2.752	13	16.770	21	37.414	34	54.184	1.594	64	136.733	2.136
1994	14	30.142	10	23.467	24	53.609	2.234	9	14.447	46	128.733	55	143.180	2.603	79	196.789	2.491
1995	19	55.017	8	14.793	27	69.810	2.586	19	41.380	10	26.375	29	67.755	2.336	56	137.565	2.457
1996	22	67.664	10	27.550	32	95.214	2.975	17	23.920	27	87.911	44	111.831	2.542	76	207.045	2.724
1997	22	62.800	11	30.266	33	93.066	2.820	16	34.259	10	29.285	26	63.544	2.444	59	156.610	2.654
1998	23	62.962	9	18.794	32	81.756	2.555	26	35.912	17	41.448	43	77.360	1.799	75	159.116	2.122
1999	12	25.763	6	12.374	18	38.137	2.119	14	24.476	12	28.086	26	52.562	2.022	44	90.699	2.061
2000	14	35.721	6	19.065	20	54.786	2.739	14	18.949	19	27.058	33	46.007	1.394	53	100.793	1.902
2001	9	21.610	2	2.325	11	23.935	2.176	14	52.781	15	39.086	29	91.867	3.168	40	115.802	2.895
2002	3	3.016	5	11.200	8	14.216	1.777	15	23.506	7	19.699	22	43.205	1.964	30	57.421	1.914
2003	5	11.576	5	8.658	10	20.234	2.023	9	35.182	21	28.380	30	63.562	2.119	40	83.796	2.095
2004	10	22.223	0	0	10	22.223	2.222	7	18.105	22	41.189	29	59.294	2.045	39	81.517	2.090
2005	7	15.085	0	0	7	15.085	2.155	9	16.632	24	49.399	33	66.031	2.001	40	81.116	2.028
2006	12	17.906	3	9.139	15	27.045	1.803	14	21.597	17	29.714	31	51.311	1.655	46	78.356	1.703
2007	9	15.925	1	3.517	10	19.442	1.944	13	17.886	15	33.027	28	50.913	1.818	38	70.355	1.851
2008	4	7.274	3	6.673	7	13.947	1.992	18	41.803	7	14.330	25	56.133	2.245	32	70.080	2.190
2009	3	5.627	0	0	3	5.627	1.876	29	37.124	20	37.770	49	74.894	1.528	52	80.521	1.548
2010	3	4.183	0	0	3	4.183	1.394	11	28.889	17	23.568	28	52.457	1.873	31	56.640	1.827
2011	1	715	0	0	1	715	715	14	23.474	22	31.621	36	55.095	1.530	37	55.810	1.508

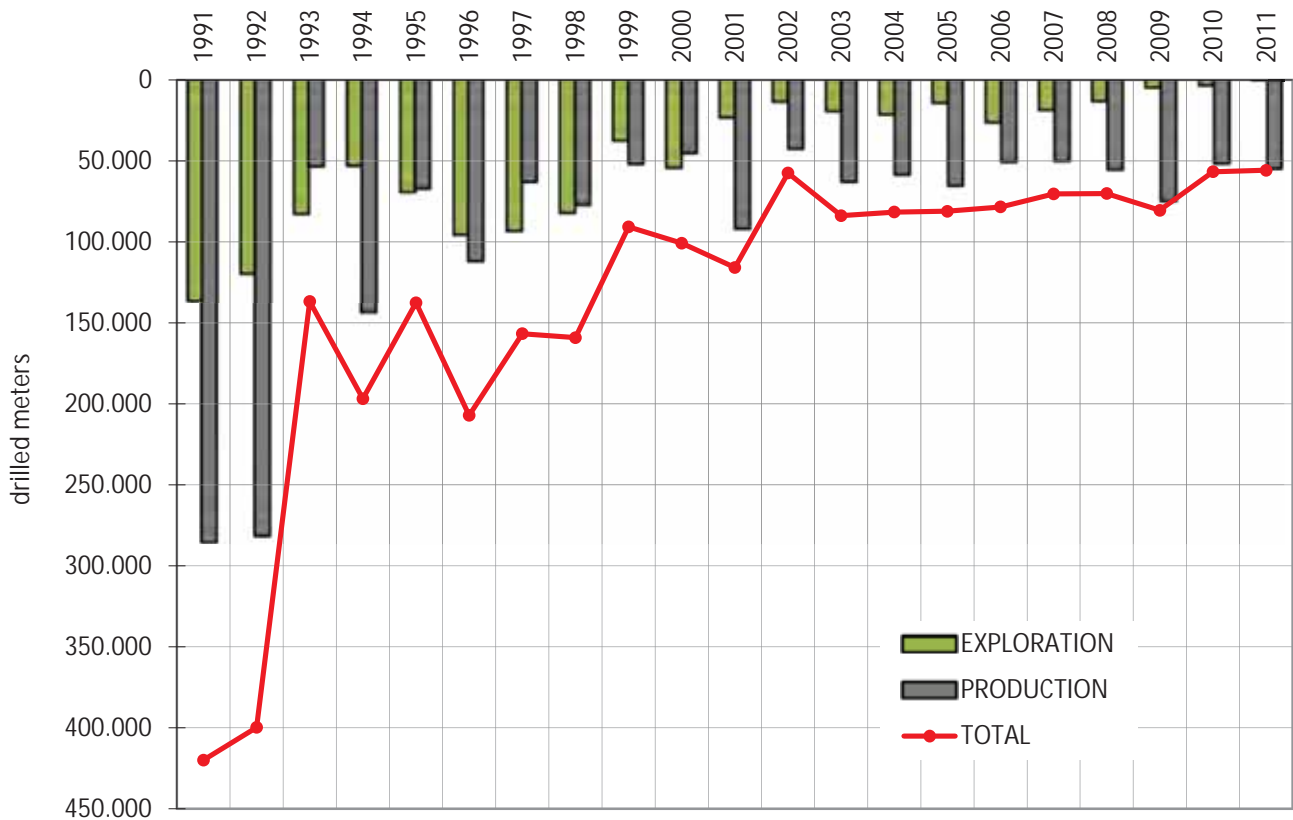
Drilling wells list during 2011

N.	Name	Location	Aim	drilled meters	beginning year	last year
1	BARBARA E 041 DIR A	Offshore	Workover	1.144	2011	2011
2	BARBARA E 042 DIR A	Offshore	Workover	1.057	2011	2011
3	BARBARA E 049 DIR A	Offshore	Workover	1.283	2011	2011
4	BARBARA E 054 DIR A	Offshore	Workover	1.170	2011	2011
5	BARBARA F 063 DIR A	Offshore	Workover	812	2011	2011
6	BARBARA NW 005 DIR A	Offshore	Workover	1.540	2011	2011
7	BARBARA NW 006 DIR A	Offshore	Workover	1.582	2011	2011
8	BARBARA NW 007 DIR B	Offshore	Workover	1.612	2011	2011
9	CALPURNIA 004 DIR A	Offshore	Workover	585	2011	2011
10	CALPURNIA 005 DIR A	Offshore	Workover	701	2011	2011
11	CASA TIBERI 001	Onshore	Exploration	715	2011	
12	CLARA NORD 004 DIR A	Offshore	Workover	1.316	2011	2011
13	CLARA NORD 006 DIR A	Offshore	Workover	1.588	2011	2011
14	CLARA NORD 007 DIR A	Offshore	Workover	1.192	2011	2012
15	CLARA NORD 008 DIR A	Offshore	Workover	1.551	2011	2011
16	COTIGNOLA B 001	Onshore	Stoccaggio	1.106	2011	2011
17	COTIGNOLA B 001 DIR	Onshore	Stoccaggio	681	2011	2011
18	COTIGNOLA B 002 DIR	Onshore	Stoccaggio	1.196	2011	
19	COTIGNOLA B 003 DIR	Onshore	Stoccaggio	1.273	2011	2011
20	COTIGNOLA B 003 DIR ST	Onshore	Stoccaggio	781	2011	
21	COTIGNOLA C 001 DIR	Onshore	Stoccaggio	1.086	2011	
22	COTIGNOLA C 003 DIR	Onshore	Stoccaggio	1.613	2011	
23	COTIGNOLA C 007 DIR	Onshore	Stoccaggio	1.327	2011	2011
24	DARIA 005 DIR A	Offshore	Workover	2.380	2011	2012
25	DARIA 007 DIR B	Offshore	Workover	1.111	2011	2011
26	DARIA 010 DIR B	Offshore	Workover	798	2011	2011
27	DARIA 011 DIR A	Offshore	Workover	1.022	2010	2011
28	DARIA 014 DIR A	Offshore	Workover	1.235	2011	2011
29	GORGOGNONE 002	Onshore	Sviluppo	5.111	2010	
30	GUENDALINA 002 DIR	Offshore	Sviluppo	3.280	2011	
31	GUENDALINA 003	Offshore	Sviluppo	3.164	2011	
32	LUNA 041 DIR A	Offshore	Workover	1.498	2011	2012
33	MONTE ENOC 010 OR-B	Onshore	Workover	1.929	2010	2011
34	MUZZA 005 DIR	Onshore	Sviluppo	2.047	2011	2011
35	SAN POTITO A 001 DIR	Onshore	Stoccaggio	2.159	2011	2011
36	VITALBA 001 DIR A	Onshore	Workover	1.191	2011	2011
37	VOLTURINO 001 OR B	Onshore	Workover	1.974	2011	2011

NUMBER OF DRILLED WELLS: YEARS 1991-2011



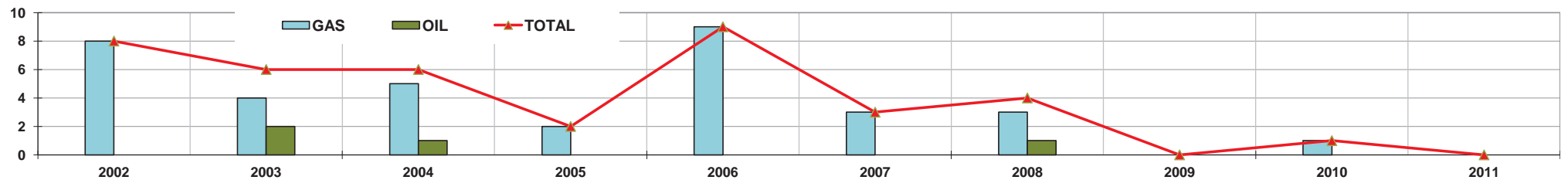
DRILLED METERS: YEARS 1991-2011



DISCOVERIES years 2002-2011

☼ Gas
● Oil

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
ONSHORE		☼ Agosta 1dir (FE) ☼ Fonte Filippo 1 dir (CH) ☼ Muzza 4dirA (MO) ☼ San Pietro SW 1 (AN)	● Agri 1 (PZ) ● Agri 1orA (PZ) ☼ Capparuccia 1dir (AP)	☼ Abbadesse 001 DIR (RA) ☼ Civita 001 DIR (CH) ☼ Monte dell'Aquila 001 DIR (CT) ☼ Monte Guzzo 001 DIR (AP) ☼ Santa Maddalena 001 DIR (BO) ● Tesrauro 001 DIR (RG)	☼ Vitalba 001 (CR) ☼ Mezzocolle 001 DIR (BO)	☼ Codogno 001 DIR (CR) ☼ Colle Sciarra 001 DIR A(TET) ☼ Filici 001 DIR A (MT) ☼ Fonte Filippo Sud Est 001 (CH) ☼ Longanesi 001 (RA) ☼ Ripalta 61 OR (BO) ☼ Vitalba 001 DIR (CR)	☼ Colle Sciarra 001 DIR B (TE) ☼ Monte Pallano 001 DIR (CH) ☼ Monte Pallano 002 DIR (CH)	☼ Monte della Crescia 001 Dir (AN)		☼ Masseria Morano 1 Dir (MT)		
	OFFSHORE	Zona A		☼ Annamaria 2 ☼ Armida 1dirA			☼ BENEDETTA 001 DIR					
		Zona B	☼ Calipso 3dirA ☼ Calipso 4dirA ☼ Didone 2						● Ombrina Mare 002 Dir			
		Zona F										
		Zona G	☼ Panda 1	☼ Panda Ovest 1			☼ ARGO 001		☼ Cassiopea 001 DIR ☼ Argo 002			



Mining licenses for hydrocarbons

Years 1991 - 2011

EXPLORATION PERMITS

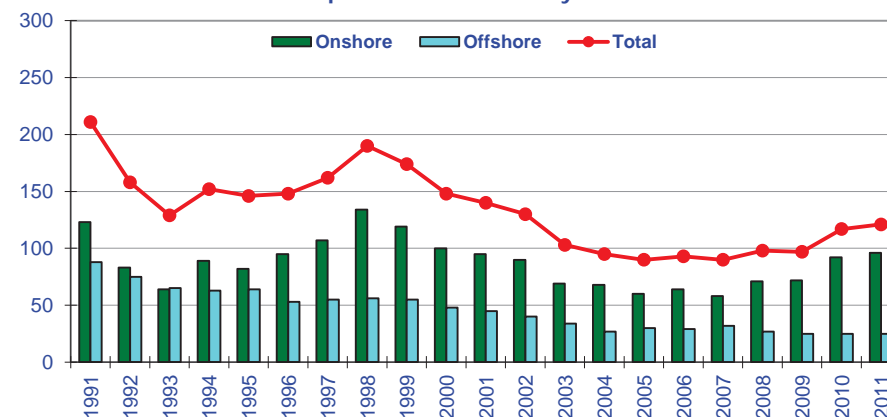
	Onshore	Offshore	Total
1991	123	88	211
1992	83	75	158
1993	64	65	129
1994	89	63	152
1995	82	64	146
1996	95	53	148
1997	107	55	162
1998	134	56	190
1999	119	55	174
2000	100	48	148
2001	95	45	140
2002	90	40	130
2003	69	34	103
2004	68	27	95
2005	60	30	90
2006	64	29	93
2007	58	32	90
2008	71	27	98
2009	72	25	97
2010	92	25	117
2011	96	25	121

PRODUCTION LICENSES

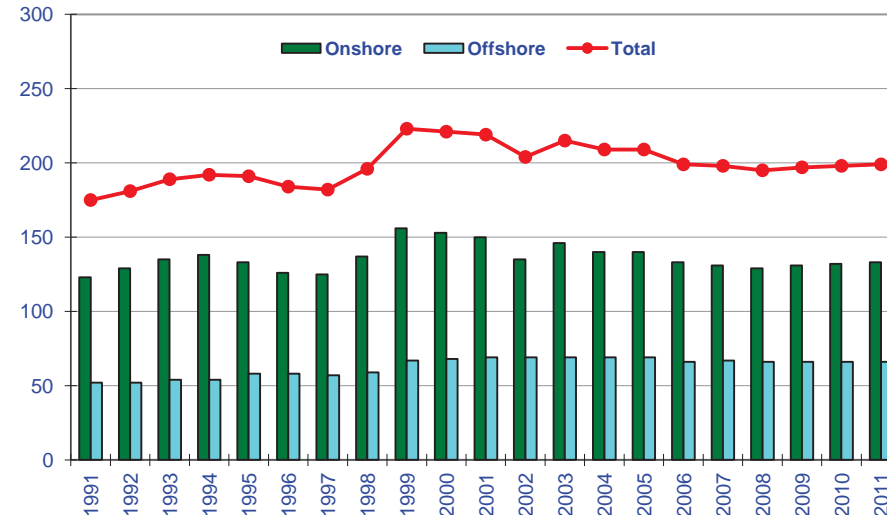
	Onshore	Offshore	Total
1991	123	52	175
1992	129	52	181
1993	135	54	189
1994	138	54	192
1995	133	58	191
1996	126	58	184
1997	125	57	182
1998	137	59	196
1999	156	67	223
2000	153	68	221
2001	150	69	219
2002	135	69	204
2003	146	69	215
2004	140	69	209
2005	140	69	209
2006	133	66	199
2007	131	67	198
2008	129	66	195
2009	131	66	197
2010	132	66	198
2011	133	66	199

Total
386
339
318
344
337
332
344
386
397
369
359
334
318
304
304
292
288
293
294
315
320

Number of exploration Licenses - years 1991-2011



Number of Production Licenses - anni 1991-2011



Onshore licenses

Data till December 31st 2011

REGIONS		EXPLORATION PERMITS			PRODUCTION LICENSES			TOTAL	
	Regional area (km ²)	Number	Area (km ²)	% of Region's area	Number	Area (km ²)	% of Region's area	Tot. Area (km ²)	% of Region's area
VALLE D'AOSTA	3.266	0	0,00	0,0%	0	0	0,0%	0,00	0,0%
PIEMONTE	25.398	3	1.919,57	7,6%	1	77,76	0,3%	1.997,33	7,9%
LIGURIA	5.421	0	0,00	0,0%	0	0,00	0,0%	0,00	0,0%
LOMBARDIA	23.861	12	3.797,84	15,9%	13	988,61	4,1%	4.786,45	20,1%
TRENTINO-ALTO ADIGE	13.599	0	0,00	0,0%	0	0,00	0,0%	0,00	0,0%
VENETO	18.390	1	529,75	2,9%	1	163,33	0,9%	693,08	3,8%
FRIULI-VENEZIA GIULIA	7.712	0	0,00	0,0%	0	0,99	0,0%	0,00	0,0%
EMILIA-ROMAGNA	22.122	36	8.063,76	36,5%	36	1.741,35	7,9%	9.805,11	44,3%
NORTHERN ITALY	119.769	52	14.310,92	11,9%	51	2.972,04	2,5%	17.282,96	14,4%
TOSCANA	22.990	2	389,37	1,7%	2	307,71	1,3%	697,08	3,0%
MARCHE	9.695	6	1.023,79	10,6%	18	1.136,11	11,7%	2.159,90	22,3%
UMBRIA	8.454	0	0,00	0,0%	0	0,00	0,0%	0,00	0,0%
LAZIO	17.210	6	3.012,14	17,5%	1	41,14	0,2%	3.053,28	17,7%
ABRUZZO	10.793	7	3.041,95	28,2%	6	490,14	4,5%	3.532,09	32,7%
MOLISE	4.438	3	801,53	18,1%	4	336,93	7,6%	1.138,46	25,7%
CENTRAL ITALY	73.580	24	8.268,78	11,2%	31	2.312,03	3,1%	10.580,81	14,4%
CAMPANIA	13.592	1	876,04	6,4%	0	0,00	0,0%	876,04	6,4%
PUGLIA	19.364	1	154,55	0,8%	14	1.252,46	6,5%	1.407,01	7,3%
BASILICATA	9.992	12	1.590,66	15,9%	21	2.121,34	21,2%	3.712,00	37,1%
CALABRIA	15.083	0	0,00	0,0%	2	103,21	0,7%	103,21	0,7%
SOUTHERN ITALY	58.031	14	2.621,25	4,5%	37	3.477,01	6,0%	6.098,26	10,5%
SICILIA	25.701	5	3.074,66	12,0%	14	596,85	2,3%	3.671,51	14,3%
SARDEGNA	24.090	1	443,00	1,8%	0	0,00	0,0%	0,00	0,0%
ISLANDS	49.791	6	3.517,66	7,1%	14	596,85	1,2%	3.671,51	7,4%
TOTAL	301.171	96	28.718,61	9,5%	133	9.357,93	3,1%	37.633,54	12,5%

N.B.

In case of licenses extending over two or more zones, the surface shares are attributed to the zones they belong to, while the mining unit is assigned to the zone including the largest surface share.

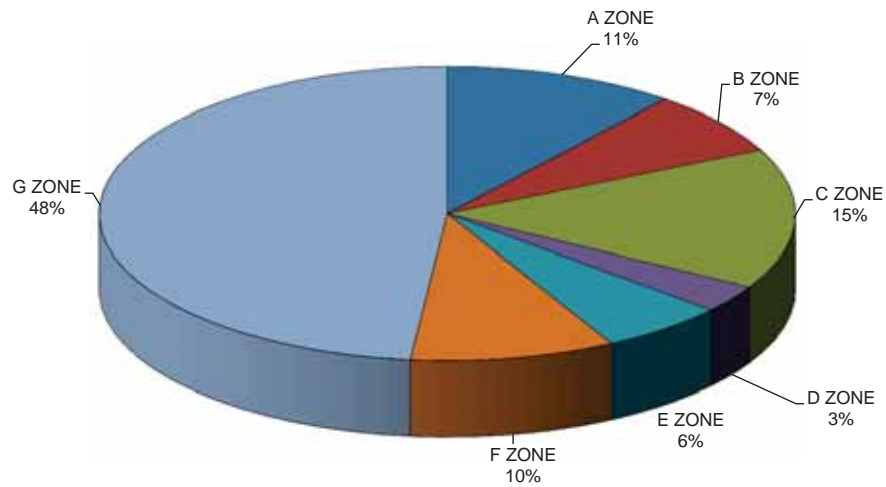
Mining licence area is far superior than that one actually taken up by plants (well areas, treatment stations and plants). Mining licence not pertaining areas not taken up by the aforesaid plants nevertheless can be used for all usual human activities.

Offshore licenses

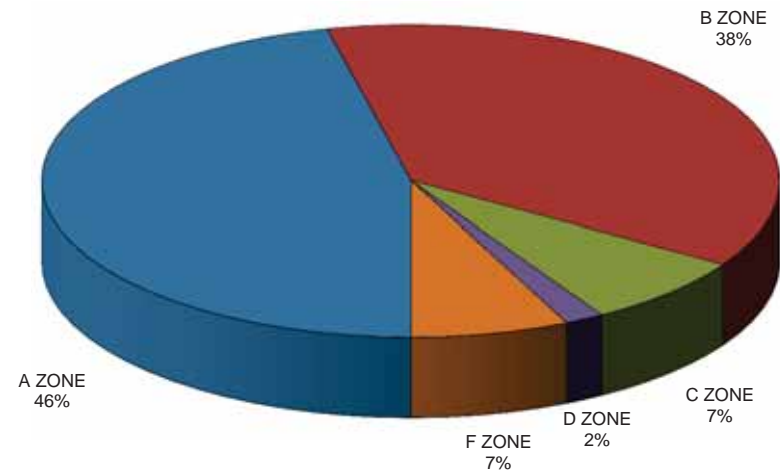
Data till December 31st 2011

SEA ZONES	EXPLORATION PERMITS		PRODUCTION LICENSES		TOTAL AREA (Km ²)
	Number of permits	Area (Km ²)	Number of licenses	Area (Km ²)	
A ZONE	7	1.257,64	38	4.143,35	5.400,99
B ZONE	3	827,23	19	3.365,13	4.192,36
C ZONE	3	1.806,26	3	659,51	2.465,77
D ZONE	0	357,97	3	153,40	511,37
E ZONE	1	683,13	0	0,00	683,13
F ZONE	2	1.111,17	3	618,68	1.729,85
G ZONE	9	5.645,79	0	0,00	5.645,79
TOTAL	25	11.689,19	66	8.940,07	20.629,26

Offshore exploration permits



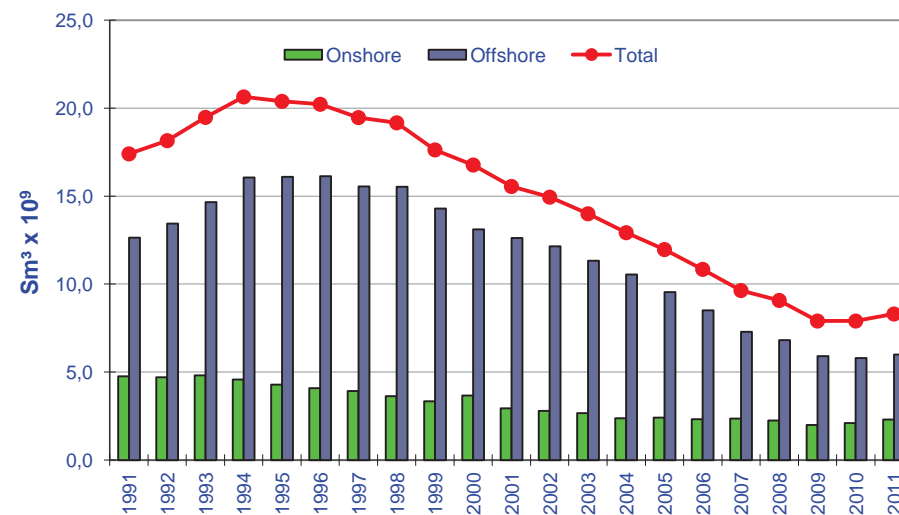
Offshore production licenses



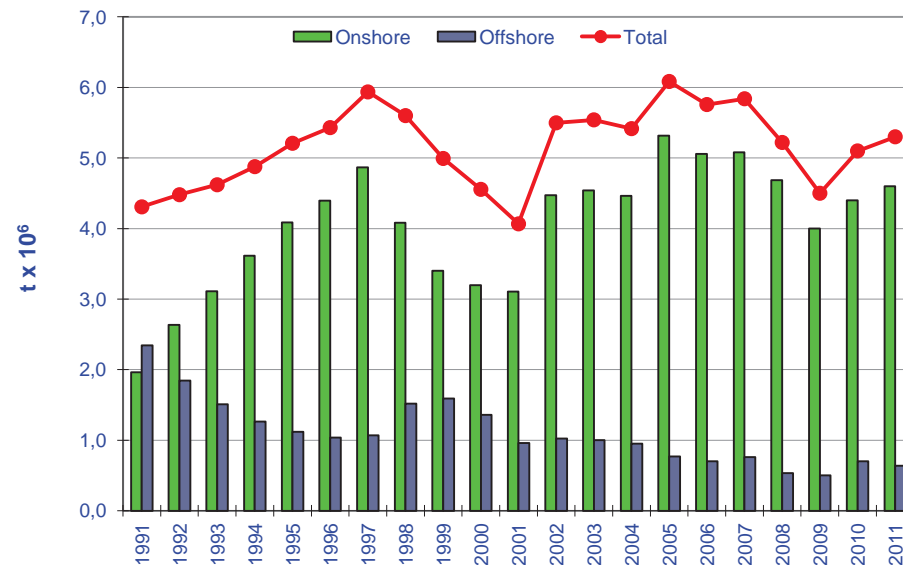
Hydrocarbons production Years 1991 - 2011

YEAR	GAS (Sm ³ x 10 ⁹)			OIL (t x 10 ⁶)			GASOLINE (t x 10 ³)		
	Onshore	Offshore	Total	Onshore	Offshore	Total	Onshore	Offshore	Total
1991	4,8	12,6	17,4	2,0	2,3	4,3	17,0	8,0	25,0
1992	4,7	13,4	18,2	2,6	1,8	4,5	16,0	6,0	22,0
1993	4,8	14,7	19,5	3,1	1,5	4,6	13,0	7,0	20,0
1994	4,6	16,1	20,6	3,6	1,3	4,9	12,0	6,0	18,0
1995	4,3	16,1	20,4	4,1	1,1	5,2	22,0	6,0	28,0
1996	4,1	16,1	20,2	4,4	1,0	5,4	17,0	5,0	22,0
1997	3,9	15,5	19,5	4,9	1,1	5,9	17,0	5,0	22,0
1998	3,6	15,5	19,2	4,1	1,5	5,6	18,0	4,0	22,0
1999	3,3	14,3	17,6	3,4	1,6	5,0	17,0	5,0	22,0
2000	3,7	13,1	16,8	3,2	1,4	4,6	25,0	6,0	31,0
2001	2,9	12,6	15,5	3,1	1,0	4,1	23,0	8,0	31,0
2002	2,8	12,1	14,9	4,5	1,0	5,5	22,0	11,0	33,0
2003	2,7	11,3	14,0	4,5	1,0	5,5	24,7	5,6	30,3
2004	2,4	10,5	12,9	4,5	1,0	5,4	23,0	6,0	29,0
2005	2,4	9,5	12,0	5,3	0,8	6,1	22,6	4,0	26,6
2006	2,3	8,5	10,8	5,1	0,7	5,8	20,9	3,0	23,9
2007	2,4	7,3	9,6	5,1	0,8	5,8	20,2	1,4	21,5
2008	2,3	6,8	9,1	4,7	0,5	5,2	22,3	0,7	23,0
2009	2,0	5,9	7,9	4,0	0,5	4,5	22,0	0,3	22,3
2010	2,1	5,8	7,9	4,4	0,7	5,1	25,0	0,2	25,2
2011	2,3	6,0	8,3	4,6	0,6	5,3	22,9	0,1	23,0

Gas Production: years 1991 - 2011



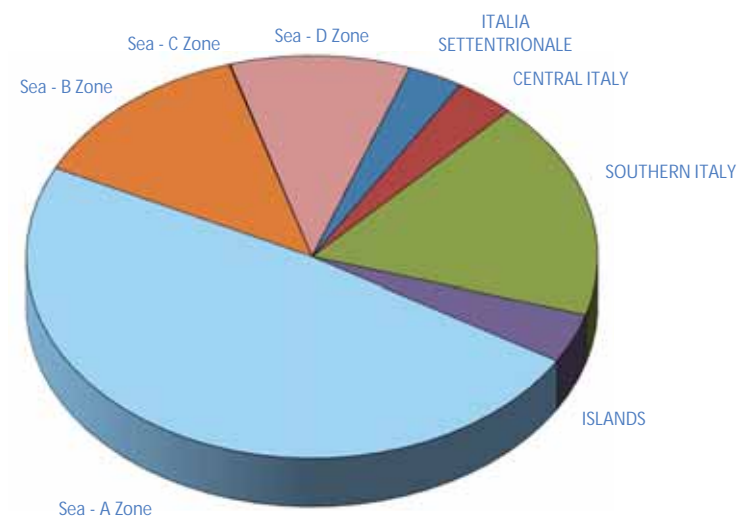
Oil Production: years 1991 - 2011



Gas production years 2011-2010-2009

GAS (Millions of Sm ³)				
Regions / Sea Zone	Year 2011	Year 2010	Year 2009	Variation % 2011/2010
VALLE D'AOSTA	0,0	0,0	0,0	-
PIEMONTE	39,7	47,5	45,9	-16,6%
LIGURIA	0,0	0,0	0,0	-
LOMBARDIA	17,1	29,8	25,1	-42,4%
TRENTINO-ALTO ADIGE	0,0	0,0	0,0	-
VENETO	2,3	3,1	3,3	-27,5%
FRIULI-VENEZIA GIULIA	0,0	0,0	0,0	-
EMILIA-ROMAGNA	203,0	148,7	157,8	36,5%
NORTHERN ITALY	262,1	229,2	232,1	14,4%
TOSCANA	1,1	1,2	1,3	-8,2%
MARCHE	184,0	51,4	66,0	258,2%
UMBRIA	0,0	0,0	0,0	-
LAZIO	0,0	0,0	0,0	-
ABRUZZO	24,1	24,1	26,6	0,1%
MOLISE	72,2	76,7	81,8	-5,8%
CENTRAL ITALY	281,4	153,3	175,8	83,5%
CAMPANIA	0,0	0,0	0,0	-
PUGLIA	282,4	316,9	333,4	-10,9%
BASILICATA	1171,3	1112,8	914,0	5,3%
CALABRIA	11,1	10,2	9,8	9,0%
SOUTHERN ITALY	1464,8	1439,9	1257,1	1,7%
SICILIA	331,9	332,9	325,2	-0,3%
SARDEGNA	0,0	0,0	0,0	-
ISLANDS	331,9	332,9	325,2	-0,3%
TOTAL OHSORE	2340,2	2155,3	1990,2	8,6%
Sea - A Zone	4054,6	3906,5	3939,3	3,8%
Sea - B Zone	1088,9	978,8	1083,8	11,2%
Sea - C Zone	4,9	5,4	4,2	-8,1%
Sea - D Zone	849,0	895,8	891,6	-5,2%
Sea - E Zone	0,0	0,0	0,0	-
TOTAL OFFSHORE	5997,4	5786,5	5918,9	3,6%
TOTAL	8337,6	7941,8	7909,1	5,0%

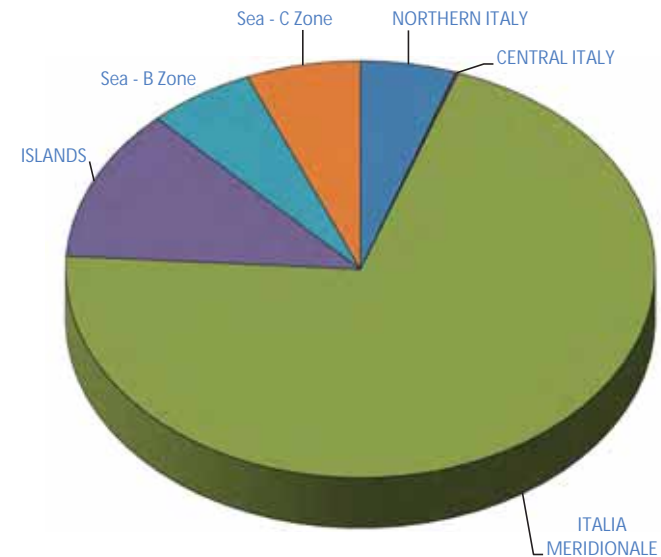
Gas Production in Italy - year 2011



Oil production years 2011-2010-2009

Oil (thousands of metric tons)				
Regions / Sea Zone	Year 2011	Year 2010	Year 2009	Variation % 2011/2010
VALLE D'AOSTA	0,0	0,0	0,0	-
PIEMONTE	248,3	300,0	263,4	-17,2%
LIGURIA	0,0	0,0	0,0	-
LOMBARDIA	0,0	0,0	0,0	-
TRENTINO-ALTO ADIGE	0,0	0,0	0,0	-
VENETO	0,0	0,0	0,0	-
FRIULI-VENEZIA GIULIA	0,0	0,0	0,0	-
EMILIA-ROMAGNA	29,7	29,1	28,9	2,0%
NORTHERN ITALY	278,0	329,1	292,3	-15,5%
TOSCANA	0,0	0,0	0,0	-
MARCHE	0,0	0,0	0,0	-
UMBRIA	0,0	0,0	0,0	-
LAZIO	0,2	0,2	0,2	-
ABRUZZO	0,0	0,0	0,0	-
MOLISE	6,6	13,0	20,8	-48,8%
CENTRAL ITALY	6,8	13,2	21,0	-48,0%
CAMPANIA	0,0	0,0	0,0	-
PUGLIA	0,0	0,0	0,0	-
BASILICATA	3731,5	3442,6	3155,5	8,4%
CALABRIA	0,0	0,0	0,0	-
SOUTHERN ITALY	3731,5	3442,6	3155,5	8,4%
SICILIA	627,2	600,4	556,1	4,5%
SARDEGNA	0,0	0,0	0,0	-
ISLANDS	627,2	600,4	556,1	4,5%
TOTAL ONSHORE	4643,5	4385,3	4024,9	5,9%
Sea - A Zone	0,0	0,0	0,0	-
Sea - B Zone	309,5	321,1	353,8	-3,6%
Sea - C Zone	330,9	374,1	172,1	-11,6%
Sea - D Zone	0,0	0,0	0,0	-
Sea - F Zone	0,0	0,0	0,0	-
TOTAL OFFSHORE	640,4	695,2	525,9	-7,9%
TOTAL	5283,9	5080,5	4550,8	4,0%

Oil production in Italy - year 2011

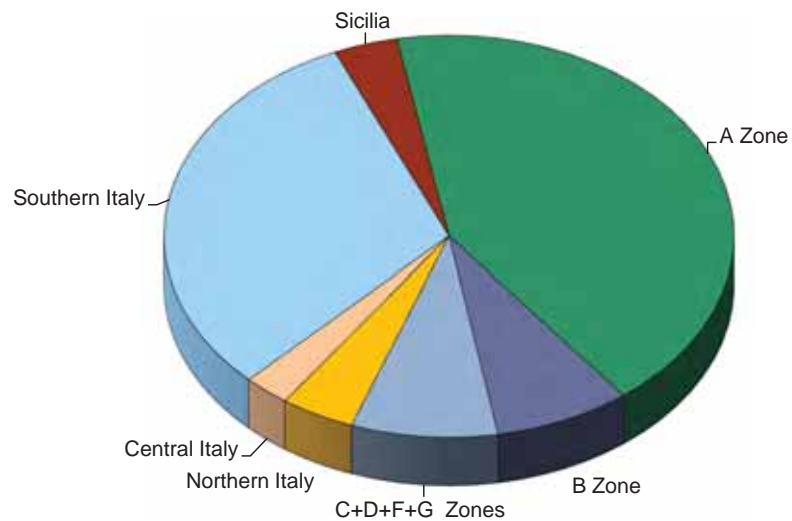


Reserves till December 31st 2011

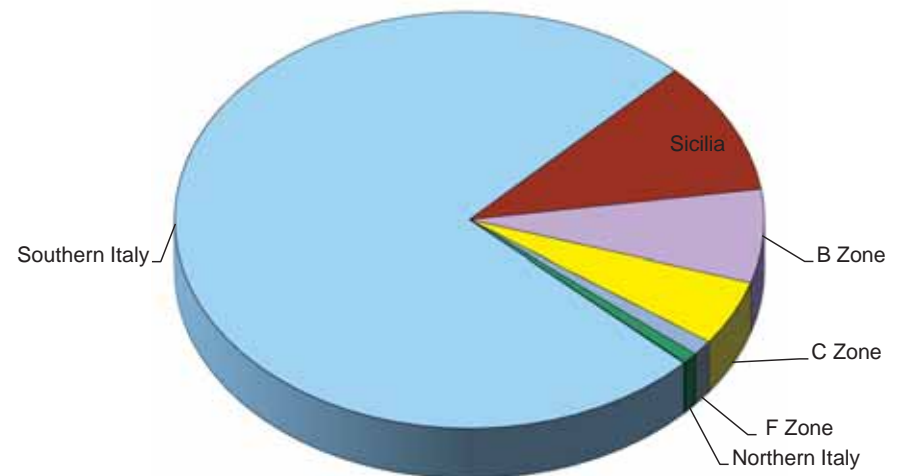
GAS (Millions di Sm ³)				
	PROVED	PROBABLE	POSSIBLE	% PROVED
Northern Italy	2.613	2.346	64	4,2%
Central Italy	1.638	1.925	622	2,6%
Southern Italy	19.373	22.220	11.028	31,1%
Sicilia	2.254	885	523	3,6%
Total onshore	25.878	27.376	12.237	41,5%
A Zone	26.455	14.836	13.210	42,4%
B Zone	4.823	5.667	797	7,7%
C+D+F+G Zones	5.185	13.565	2.284	8,3%
Total Offshore	36.463	34.068	16.291	58,5%
Total Italy	62.341	61.444	28.528	100,0%

OIL (Thousands of metric tons)				
	PROVED	PROBABLE	POSSIBLE	% PROVED
Northern Italy	658	169	128	0,9%
Central Italy	43	2.360	737	0,1%
Southern Italy	57.430	93.751	87.985	75,2%
Sicilia	7.914	4.408	5.799	10,4%
Total onshore	66.046	100.688	94.649	86,5%
B Zone	5.499	5.525	0	7,2%
C Zone	3.866	2.956	563	5,1%
F Zone	911	1.417	0	1,2%
Total Offshore	10.276	9.898	563	13,5%
Total Italy	76.322	110.586	95.212	100,0%

Proved gas reserves



Proved oil reserves



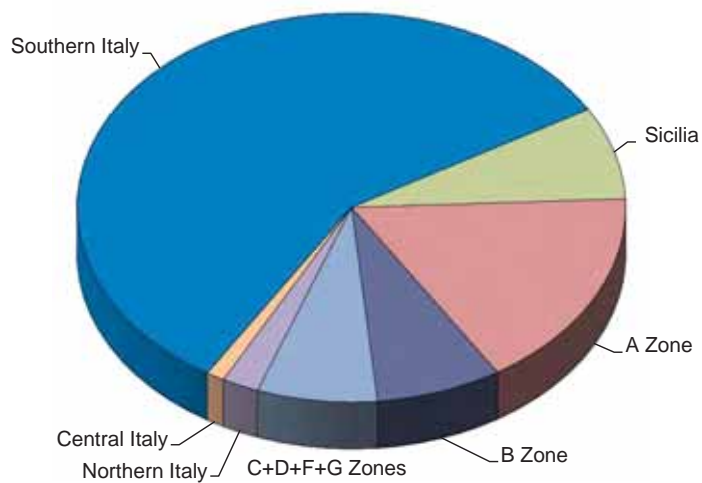
Reserves till December 31st 2011

Italian reserves (Mtoe)				
	PROVED	PROBABLE	POSSIBLE	% PROVED
Northern Italy	2,75	2,05	0,18	2,2%
Central Italy	1,35	3,90	1,23	1,1%
Southern Italy	72,93	111,53	96,81	57,8%
Sicilia	9,72	5,12	6,22	7,7%
Total onshore	86,75	122,59	104,44	68,7%
A Zone	21,16	11,87	10,57	16,8%
B Zone	9,36	10,06	0,64	7,4%
C+D+F+G Zones	8,93	15,23	2,39	7,1%
Total Offshore	39,45	37,15	13,60	31,3%
Total Italy	126,19	159,74	118,03	100,0%

OLIO (Migliaia di bbl)				
	PROVED	PROBABLE	POSSIBLE	% PROVED
Northern Italy	4.962	1.249	987	0,9%
Central Italy	313	17.362	5.422	0,1%
Southern Italy	420.634	674.679	607.471	77,1%
Sicilia	51.117	28.571	37.631	9,4%
Total onshore	477.026	721.861	651.511	87,4%
B Zone	36.451	38.708	0	6,7%
C Zone	25.464	19.409	3.804	4,7%
F Zone	6.823	10.614	0	1,3%
Total Offshore	68.738	68.731	3.804	12,6%
Total Italy	545.764	790.592	655.315	100,0%

1 Mm³ di gas = 800 toe

Italian reserves - toe



Proceeds royalties - Year 2011

Royalties revenues applied to hydrocarbons production for 2009 and 2010 years

The following amounts refer to royalties payments of made in year 2011 accounts.

Fees are refer to the following rates:

1. 2009 year's gas production rates, with an increased value during 2010 year's last months and in January 2011 by an auction procedure by means of a negotiating system (P-Gas) managed by the Energy Markets Manager - GME;
2. rates applied to 2010 year's oil production;
3. rates applied to 2010 year's gas production by an increased value according to the QE index;
4. 2010 year's gas production rates with an increased value during 2011's last months by an auction procedure operated through P-Gas -GME.

These data do not have any royalties paid by producers operating in the Sicily Region for hydrocarbons production's concessions conferred by the Regional Body.

Company	Body	2010 productions' incomes (€)	2009 productions' incomes (€)
Edison S.p.A.	Municipality	185.642,48	3.976.283,58
	Region	2.398.703,16	
	Stato	3.463.435,46	
Eni Mediterranea Idrocarburi S.p.A.	Region	599.435,63	
	Stato	490.447,34	
Eni S.p.A.	Municipality	10.801.448,18	120.822,92 8.036.962,25
	Region	68.870.327,49	
	Stato	49.878.554,52	
Gas Plus Italiana S.p.A.	Municipality	110.875,10	
	Region	636.024,42	
	Stato	6.326,33	
Ligestra S.r.l.	Stato	419.108,18	
Shell Italia E&P S.p.A.	Municipality	7.911.319,34	161.161,00
	Region	46.319.978,33	
Società Adriatica Idrocarburi S.p.A.	Municipality	59.267,84	
	Region	335.851,44	
	Stato	1.649.964,36	
Società Ionica Gas S.p.A.	Region	7.997.191,25	
	Stato	6.094.467,92	
Società Padana Energia S.p.A.	Municipality	102.618,31	
	Region	376.267,09	
	Stato	205.236,59	
Totale complessivo		208.912.490,75	12.295.229,75

Amounts of Fuel price's reduction fund – 2010 production

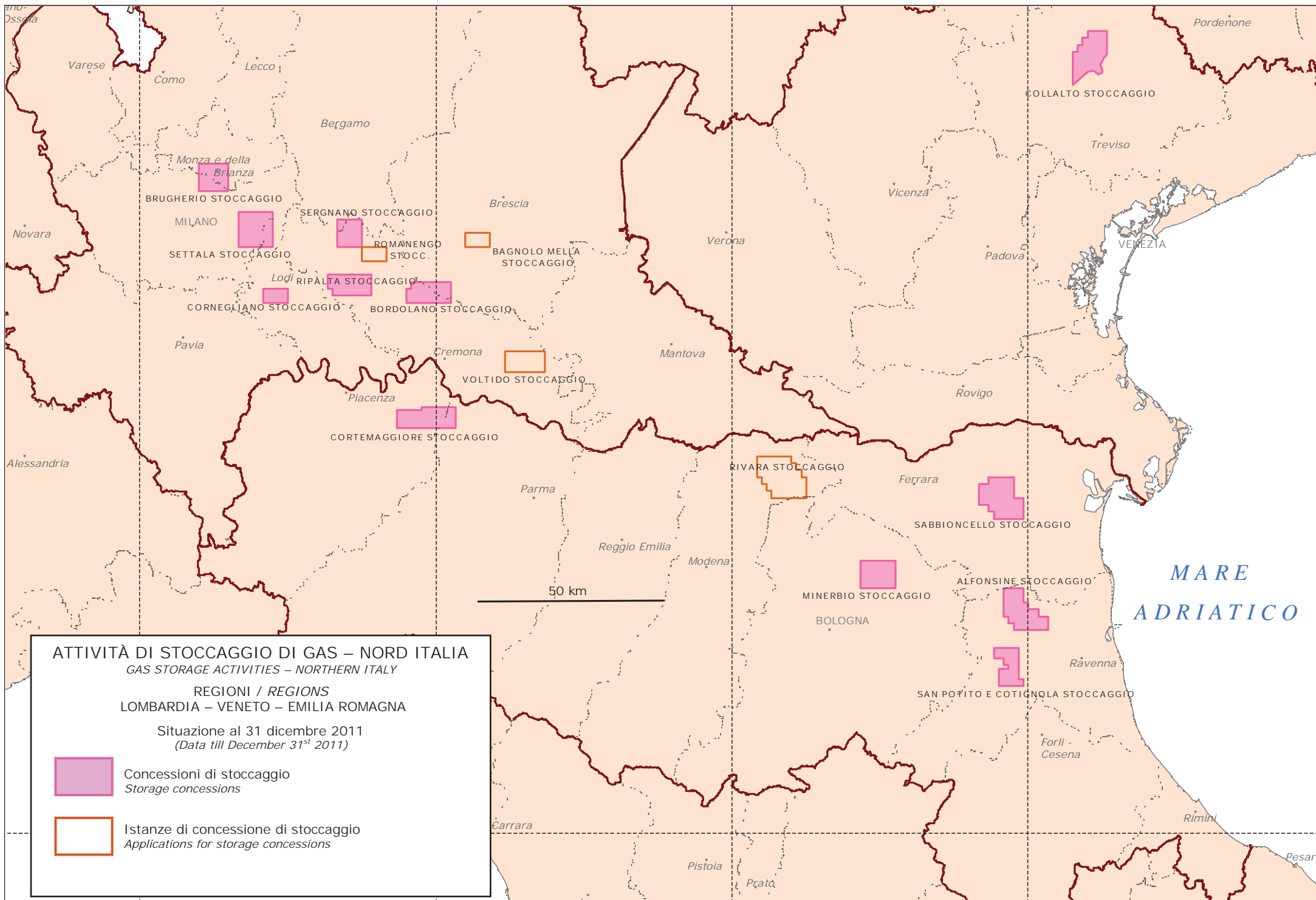
Company	Total (€)
Edison S.p.A.	573.542,18
Eni S.p.A.	30.861.280,91
Gas Plus Italiana S.p.A.	319.086,41
Shell Italia E&P S.p.A.	22.603.770,01
Società Adriatica Idrocarburi S.p.A.	169.336,77
Società Ionica Gas S.p.A.	501.887,50
Società Padana Energia S.p.A.	293.195,09
Overall	55.322.098,87

Proceeds royalties - Year 2011

Royalties revenues applied to hydrocarbons production for 2009 and 2010 years

Body subdivision


Type	Body	Total
Municipality	Alberona	30.462,29
	Ascoli Satriano	67.580,03
	Bazzano	7.408,60
	Biccari	137.080,31
	Calvello	2.081.896,95
	Candela	63.825,58
	Castelnuovo Rangone	3.704,30
	Deliceto	222.450,94
	Ferrandina	2.252,08
	Galliate	143.635,52
	Garaguso	85.238,07
	Grumento Nova	1.840.112,20
	Marsico Nuovo	1.380.084,15
	Mirandola	2.411,83
	Modena	7.408,60
	Montemurro	460.028,05
	Novi di Modena	13.868,04
	Pisticci	7.131,59
	Romentino	646.359,86
	Rotello	59.267,84
	S.Agata di Puglia	7.508,90
	San Cesario Sul Panaro	7.408,60
	San Possidonio	16.882,84
	Savignano Sul Panaro	3.704,30
	Spilamberto	39.821,20
	Trecate	556.587,64
Viggiano	11.216.126,35	
Volturino	60.924,59	
Region	Abruzzo	254.899,33
	Basilicata	100.480.358,59
	Calabria	8.044.260,53
	Emilia Romagna	8.030.341,17
	Marche	154.642,78
	Molise	1.100.549,44
	Piemonte	4.937.471,25
	Puglia	3.342.385,43
	Sicilia	1.470.854,21
Government	Government	74.220.786,53
Fund	Fuel price's reduction fund	55.322.098,87
Total		276.529.819,37




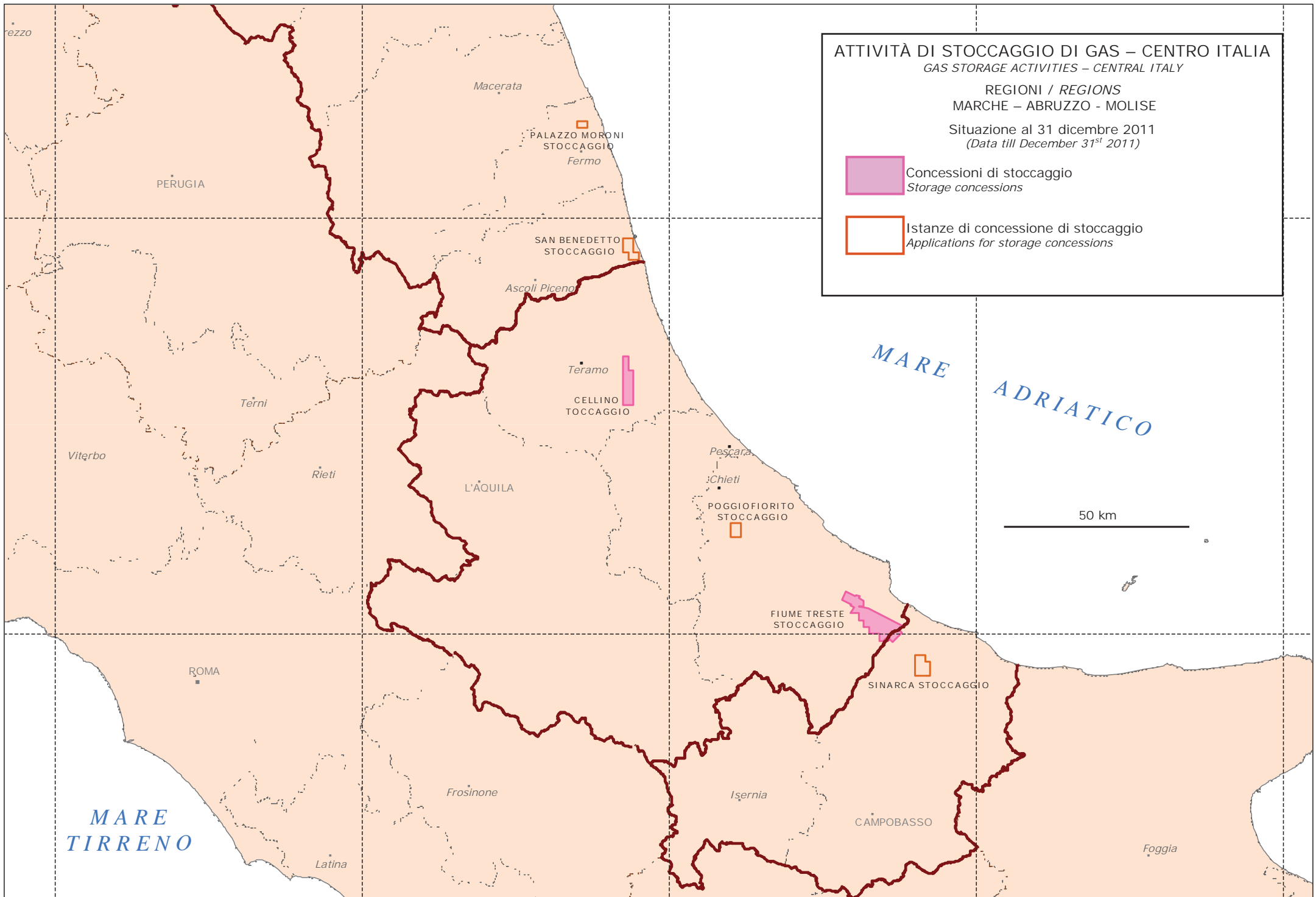
ATTIVITÀ DI STOCCAGGIO DI GAS – CENTRO ITALIA
GAS STORAGE ACTIVITIES – CENTRAL ITALY

REGIONI / *REGIONS*
MARCHE – ABRUZZO - MOLISE

Situazione al 31 dicembre 2011
(Data till December 31st 2011)

 Concessioni di stoccaggio
Storage concessions

 Istanze di concessione di stoccaggio
Applications for storage concessions



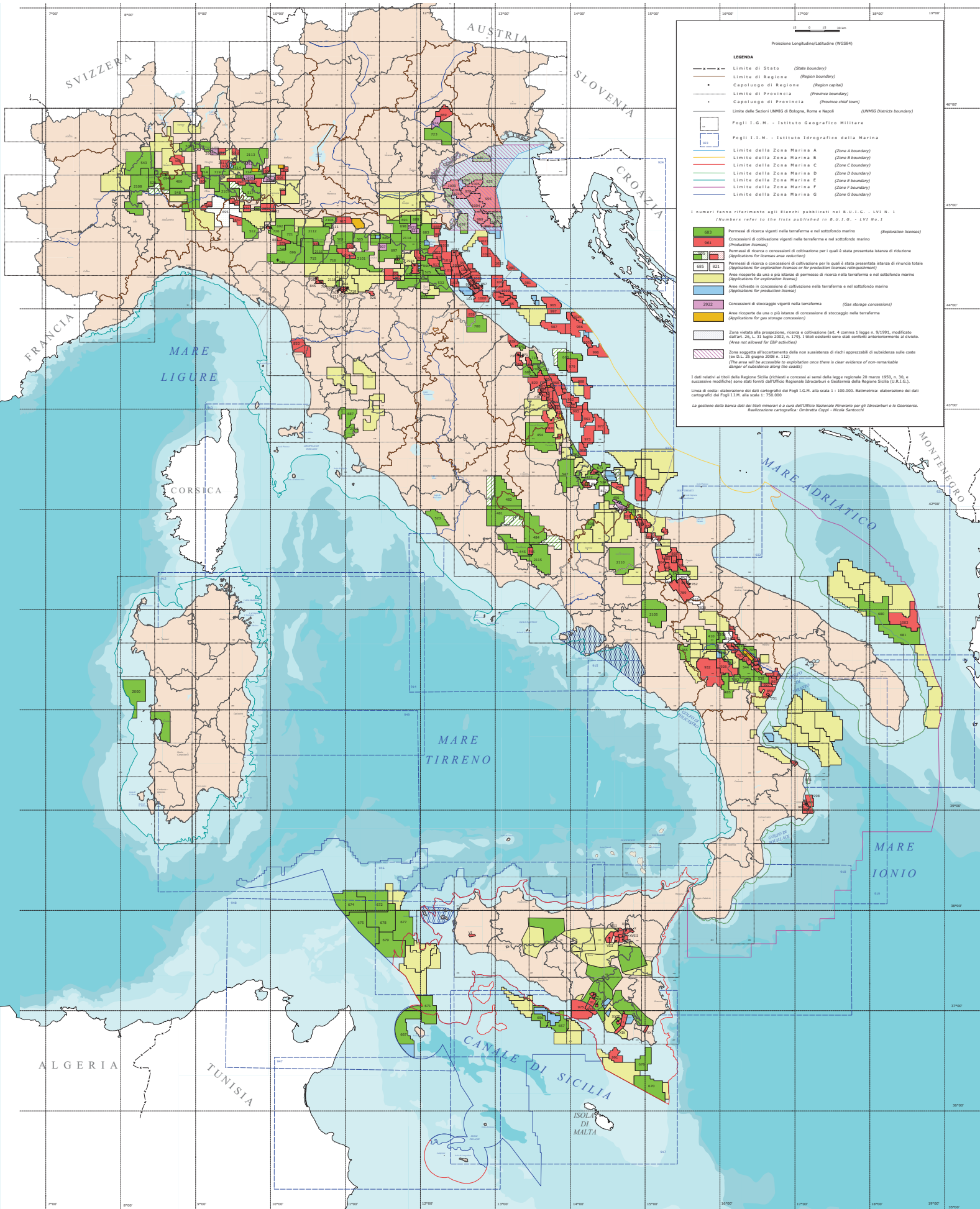
MINISTERO DELLO SVILUPPO ECONOMICO
DIPARTIMENTO PER L'ENERGIA

Direzione Generale Risorse Minerarie ed Energetiche
UFFICIO NAZIONALE MINERARIO PER GLI IDROCARBURI E LE GEORISORSE

CARTA DEI TITOLI MINERARI ESCLUSIVI PER RICERCA, COLTIVAZIONE E STOCCAGGIO DI IDROCARBURI

Bollettino Ufficiale degli Idrocarburi e delle Georisorse, Anno LVI - N. 1
<http://unmig.sviluppoeconomico.gov.it>

Situazione al 31 dicembre 2011





Ministry of Economic Developmente

Department for Energy

General Directorate for Mineral Resources and Energy

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