



#### **JODI-Gas Data Reporting System, Quality Assessment**

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Joint Organisations Data Initiative (JODI) 11<sup>th</sup> Regional Training Workshop 23 – 25 March 2015, Vienna, Austria















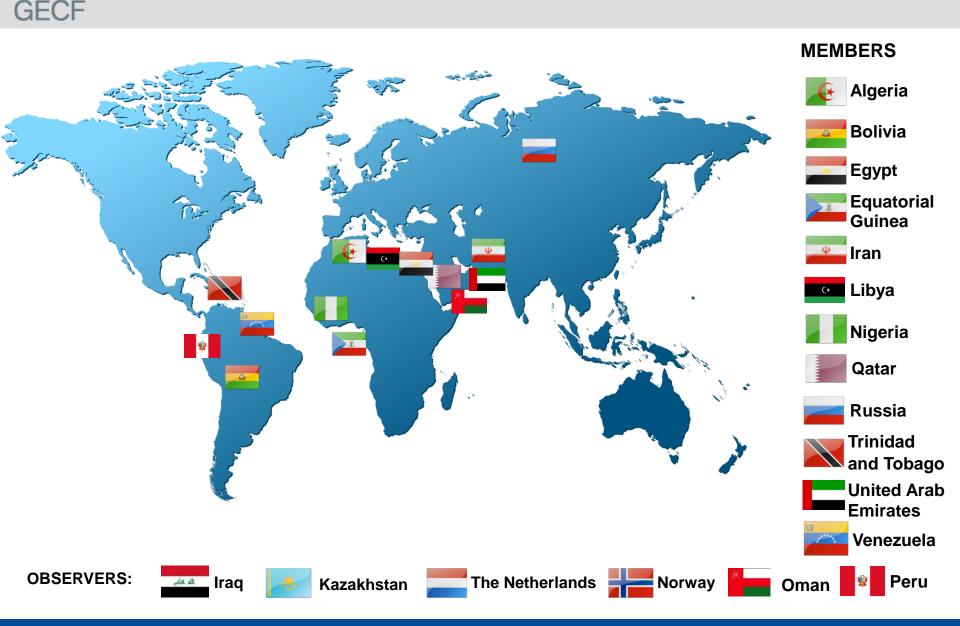


# Outline GECF

- Background(Who is the GECF, GECF Vision and Mission, GECF role in gas market)
- GECF Data Reporting Mechanism
- GECF & IEF Collaboration
- Data validation techniques
- Consistency with other energy statistics
- Participation assessment (smiley face) approach
- Mapping GECF and JoDI-Gas Questionnaires
- Future Plans.



#### What is GECF - GECF Member and Observer Countries





#### **Background: GECF Vision & Mission**

Supporting the rights and interests of the Member countries on gas resources

#### Vision

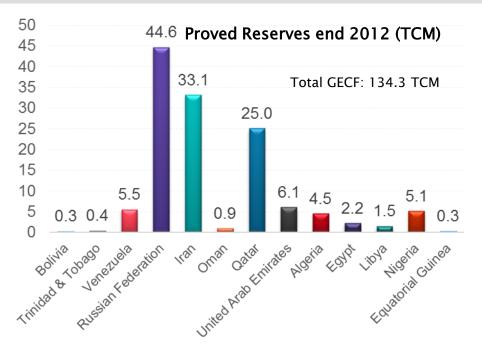
- To become an authentic platform for Gas activities
- A Credible reference in gas studies and debate
- A center for exchange of data and information on gas
- A center for policy debate on gas and energy
- A center for exchange of experience on Gas

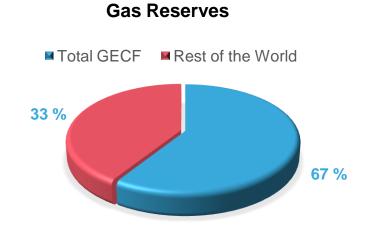
#### Mission

- To promote the use of Gas as a clean fuel and contribute to the clean environment and sustainable development;
- To increase the market share of Gas in the global energy mix;
- To contribute to the stability of the global gas market;
- To exchange data, information and experience among member countries;
- To be vigilant of the market developments on Demand, supply, prices and trades, to get a fair deal for member countries;
- To develop Dialogue with all stakeholders, including other producers and consumers.



#### The strategic Role of the GECF in the Gas Market





LNG Trade

35 %
65 %



Source: Cedigaz 2013



#### **GECF** reporting procedure: Objectives



- Promote exchange of Data and enhance close coordination with GECF Member and Observer Countries.
- Define the reference framework to regulate the collection of Data, its consolidation and analysis.
- Identify a network of National Coordinators/Focal points for Data exchange with the GECF Secretariat.
- Define and clarify the role and responsibilities of the key players in the GECF reporting process.
- Formalize and standardize the concepts and procedures of dialogue and exchange of Data between the GECF Secretariat and the GECF Member and Observer Countries.
- Identify and approve Data categories to be exchanged between the GECF Secretariat and the GECF Member and Observer Countries.



#### **GECF** reporting procedure, scope of the Procedure

#### **Process**

- Data collection: source identification (MCs OCs, Secondary Sources), Data assessment, validation and analysis.
- **Data processing:** storing Data into Databases to be defined, organized, updated and maintained continually.
- Data dissemination: GECF in-house studies, inputs for models, reports & publications, requests of MCs & OCs, meetings & conferences...

#### **Key players**

- GECF Member and Observer Countries (MCs, OCs):
  - EB MCs, Representative OCs, National Coordinators and Focal points.
- The GECF Secretariat: Staff and Analysts.

#### **Tools**

- Monthly Questionnaire;
- Annual Questionnaire;
- Official request from the GECF Secretariat.

# Data communication instructions

- Data categories: Upstream, Transportation, Downstream, Trade and Macro economic indicators,....
- **Timeline**: Data for month (N-2) at the latest on 21<sup>st</sup> day of month (N) Data of year (N-1) at the latest in September of year (N)
- Mean: Email or Data Exchange Center

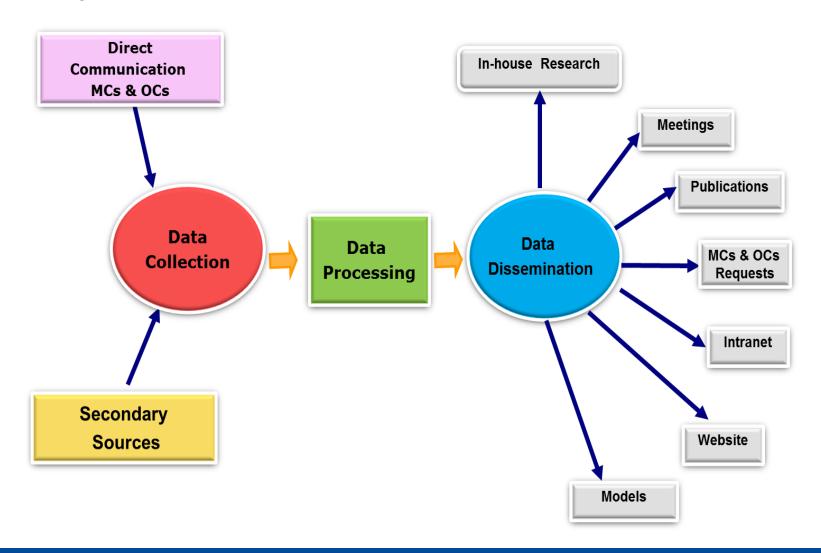
#### **Outcomes**

- GECF reporting mechanism;
- GECF views on Gas Market development & outlook, Energy and Gas Market studies:
- Contribute in the achievement of the objectives of the GECF, Database.



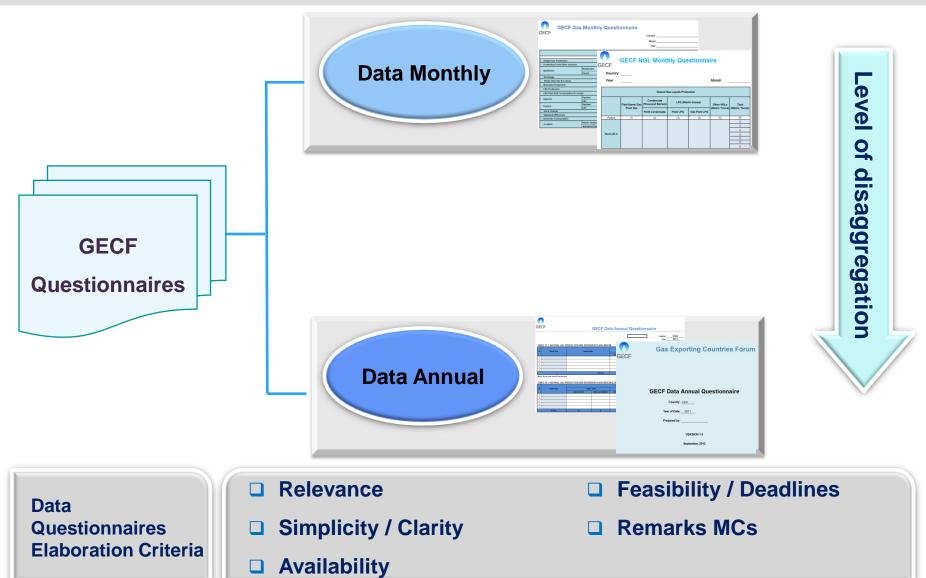
#### **GECF Reporting mechanism process**

Management of Data in the GECF is shown in the below flow chart



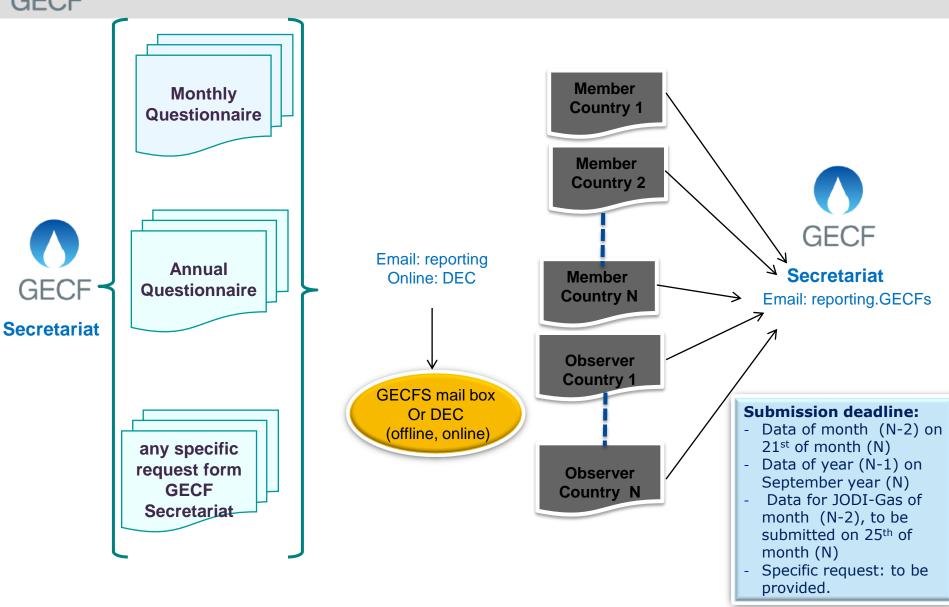


#### **GECF Data Questionnaires**





#### **GECF** reporting procedure: Data communication instructions





#### **GECF & IEF Collaboration**

2010



#### 2011



#### 2012



#### 2013



#### 2014

- GECF participated in the 12<sup>th</sup> IEF Ministerial meeting in Cancun, Dec. 2009
- GECF participated in 1<sup>st</sup> Data Transparency Conference in Moscow, Oct.2010
- IEF brief GECF on JODI – Gas during a meeting in Riyadh, Nov,2010
- GECF participated in 2<sup>nd</sup> IEF - IGU Ministerial Gas Forum in Doha,Nov,2010.

- MOU between GECF& IEF signed in Riyadh, Feb.2011
- GECF participated in IEF Extraordinary Ministerial meeting, Riyadh, Feb 2011.

- Meeting between GECF and IEF in Kuwait at 5th IEBF & JODI partners meeting, March 2012
- GECF participated in 2nd Gas Data Transparency Conference in Doha, May 2012
- GECF participated in the Second IEA-IEF-OPEC symposium on Energy Outlooks, Riyadh, Jan. 2012

- GECF & IEF
   Secretariats
   proposed holding
   Gas transparency
   workshop in Doha
   (not achieved)
- GECF & IEF
   Secretariats hold
   a meeting in
   Doha, April 2013.
- GECF Secretariat participate (Conference Call) to JODI Inter-Secretariat Meeting/Luxembo urg October 4<sup>th</sup>, 2013.

- GECF Participated in IEA-IEF-OPEC 4<sup>th</sup> symposium on Energy Outlook, Riyadh, Jan 2014.
- GECF & IEF hold meeting on JODI Gas and GECF-IEF Collaboration, Riyadh, Jan.2014
- GECF participated in JODI Gas Training, Baku Feb. 2014
- GECF participated in Inter-Secretariat meeting for JODI-Gas, Tokyo March 2014.
- GECF-IEF hold a meeting on JODI Gas Database assessment, April 23<sup>rd</sup>, 2014.
- GECF-IEF Joint Workshop on JODI Gas, April 2014
- GECF participated in JODI-Partners meeting and EF MM in Moscow, May 2014 & Launch of JODI-Gas & Inter-secretariats meetings
- GECF host the 10<sup>th</sup> JODI Oil&Gas training



### **GECF:** new JODI membership Coordination by GECF Secretariat for GECFCountries





Solid commitment and coordination are necessary at every stage to ensure JODI's continued success

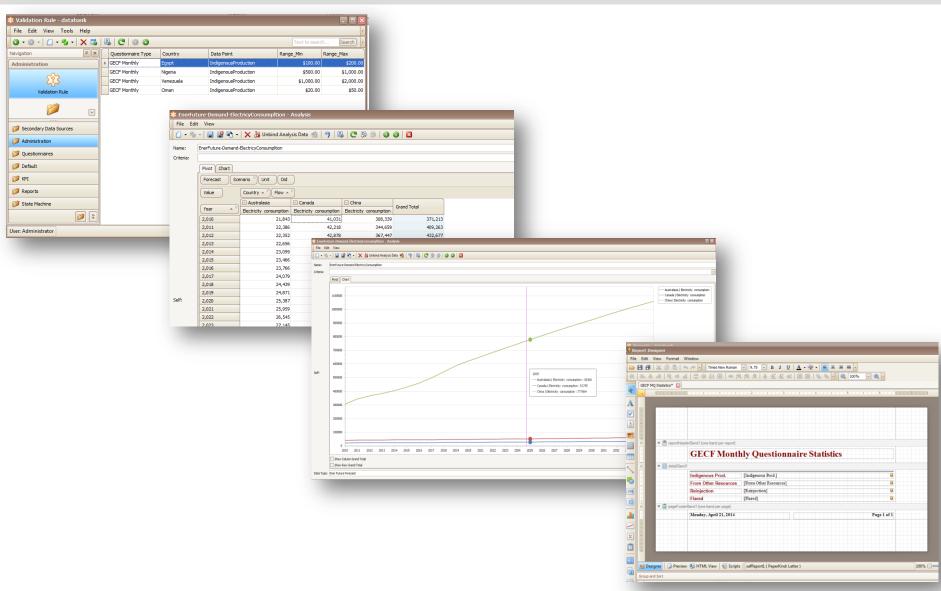


#### **GECF Databank Platform**

- GECF participation in the JoDI-Gas Data initiative is being managed as part of the organization's integrated Data Management Process.
- GECF Integrated Data Bank Platform: Data Exchange Center (DEC),
  Daily News Brief Web and Mobile App, Energy databases / data sets, and
  other modules.
- Data Exchange Center (DEC) is the collaboration and communication database for GECF member countries' monthly and annual questionnaires.
- Data Transparency: all MCs have read access to data of other countries.
- Future plans to expand the Databank Platform.
- GECF Databank is being developed in-house by DISD staff.



#### Launch of GECF Data Exchange Center with GECF Countries for MQ & AQ





#### **Challenges and future plans**

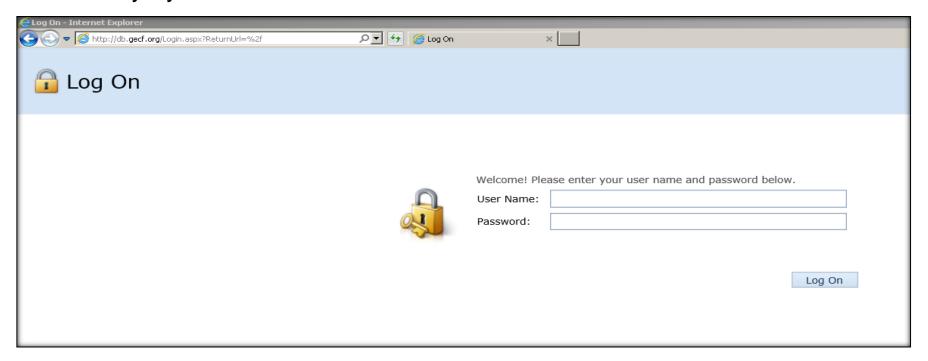
#### Short and medium term plans

- Timely submission of JODI-Gas questionnaire to IEF;
- Continues communication with focal points of member countries to solve data submission issues.;
- Expand DEC System to cover all Concepts of Data Quality checks;
- Elaborate monthly, quarterly and annual statistical reports;
- Evaluation of the possibility to report on M -1
- Develop consolidated statistical databases accessible partly through Intranet;
- Analyze best practices and the path taken by other international organizations for continuous improvement of GECF Secretariat reporting mechanism.



#### **Web-based GECF Databank Platform**

- Data Exchange Center (DEC) is the collaboration and communication database for GECF member countries' monthly and annual questionnaires.
- Web and Windows Desktop interfaces.
- Security System





#### **Role-based Security System**

- What a user can see or do depends on what role(s) he has.
- Roles: Focal point, Analyst, Administrator, ......

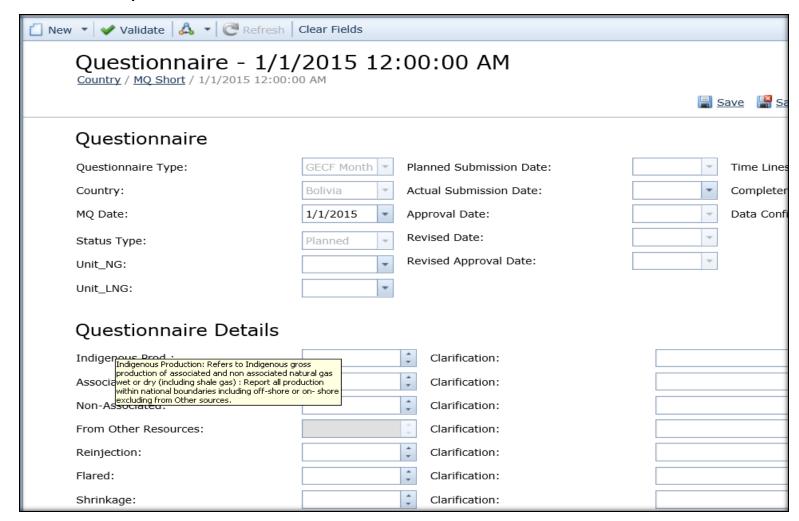






#### **GECF Monthly Questionnaire in DEC**

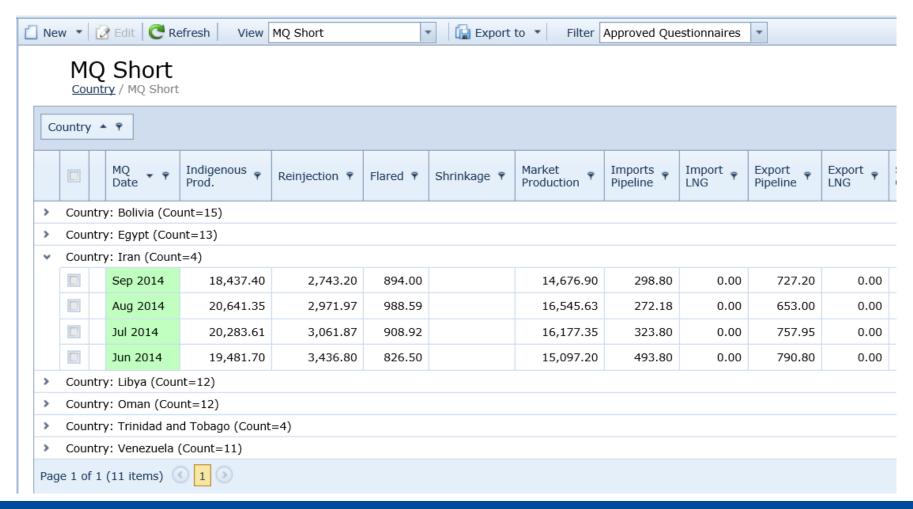
Unified GECF monthly questionnaire and related products and flows definitions are in place.





#### **DEC**: Data Accessibility / Transparency

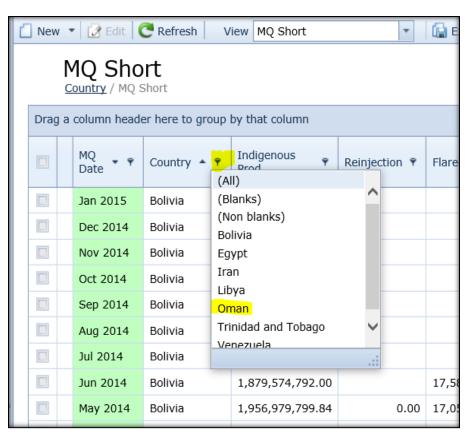
A Focal Point can browse, group, search, filter, sort monthly questionnaire data of all GECF countries.



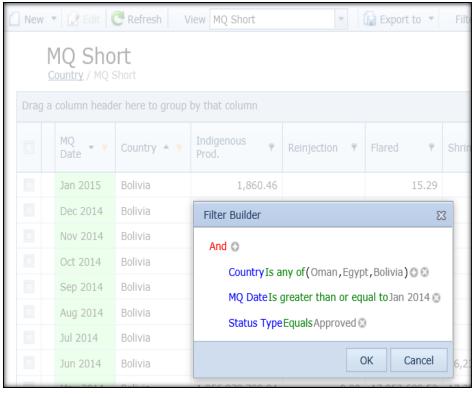


#### **DEC data Accessibility: Simple and Advanced Filter**

#### Filter by one or more columns



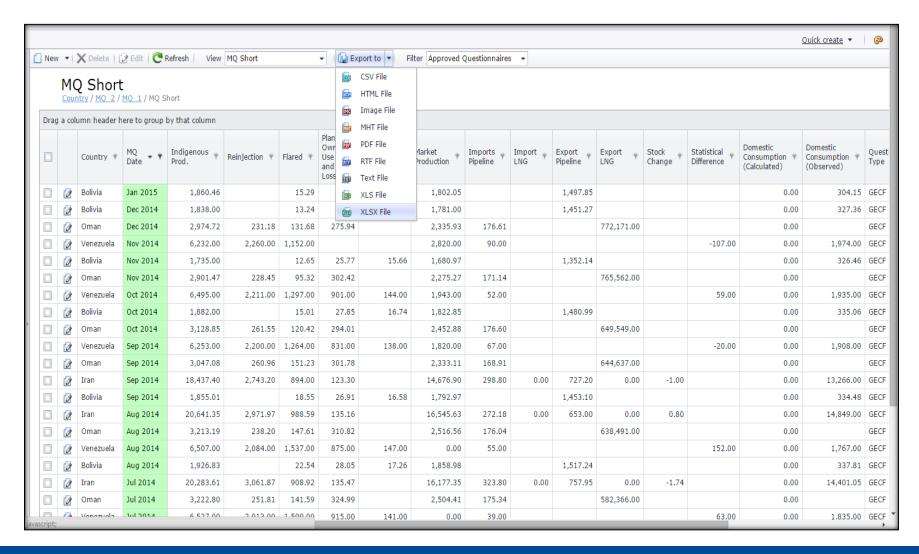
### Build a complex query with several conditions





#### **DEC data availability: Data Export**

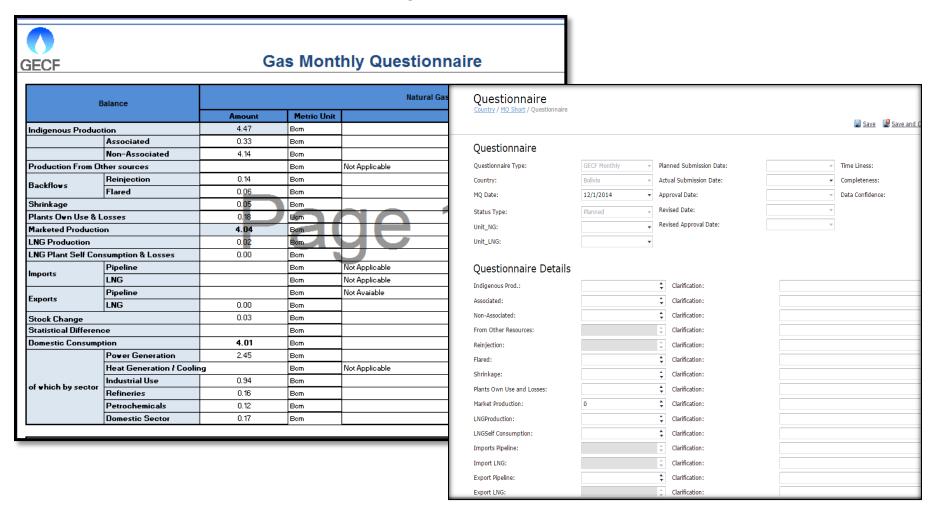
**Export** data into different file formats including **Excel**.





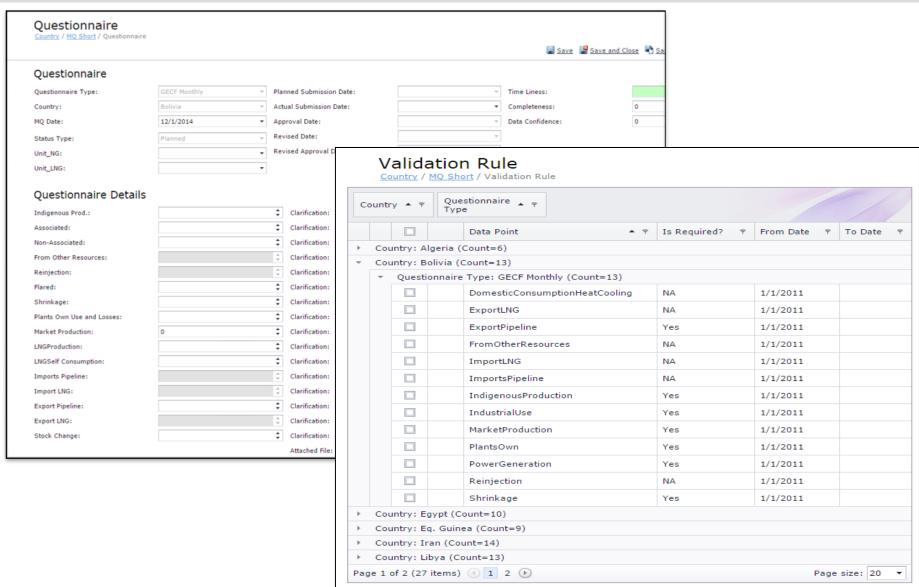
#### **Monthly Questionnaire: Excel and DEC**

MC Focal Point can fill the monthly questionnaire template in Excel file or directly update the web-based Data Exchange Center (DEC).



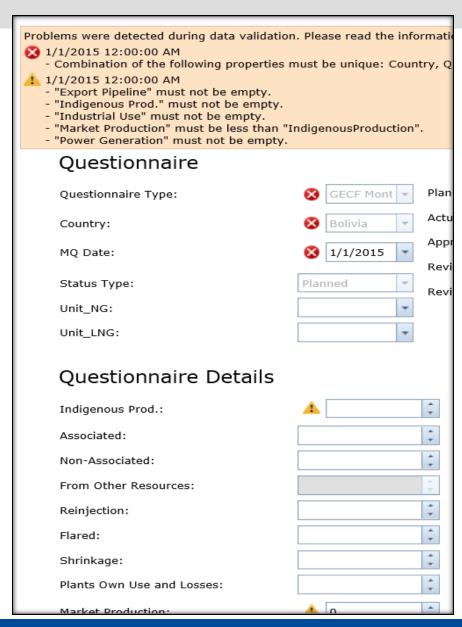


#### **DEC Data Quality: Country Specific Data Entry Validation Rules**



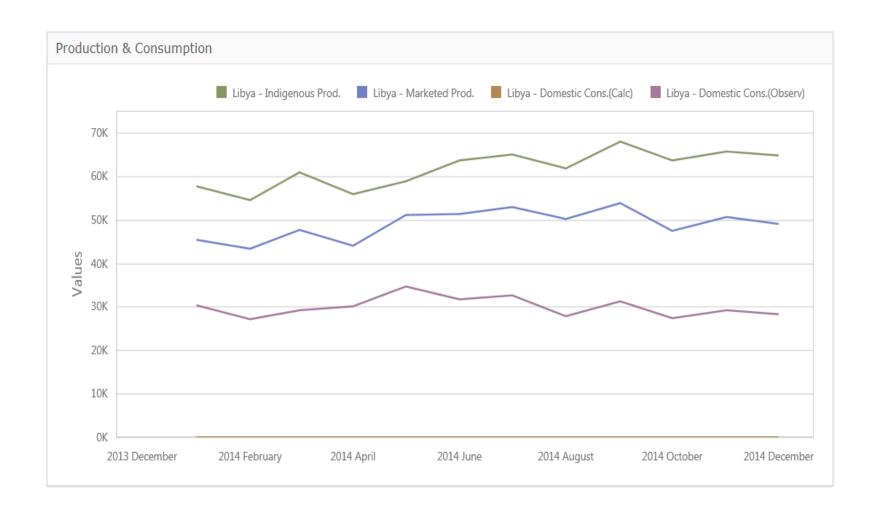


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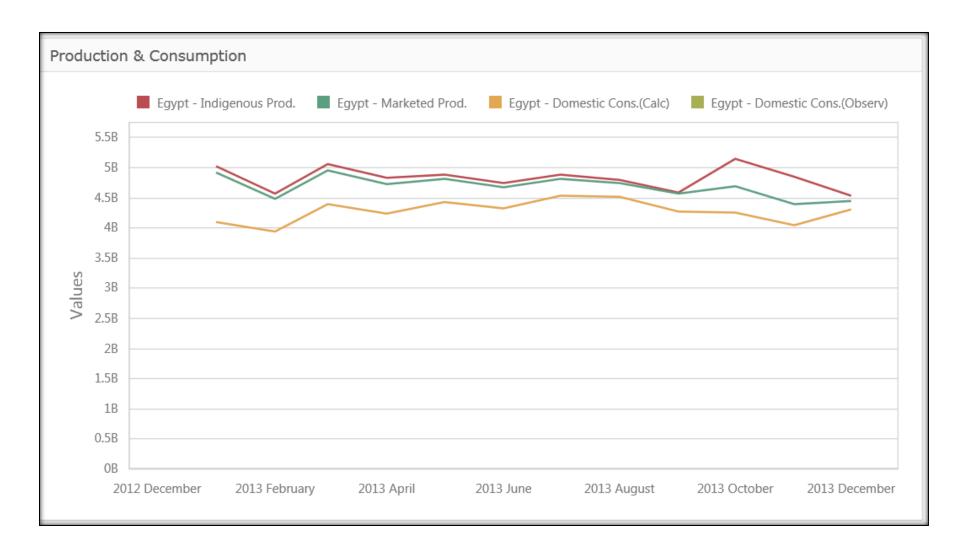


### **Data Quality Visual Check : Production and Consumption Time- Series**





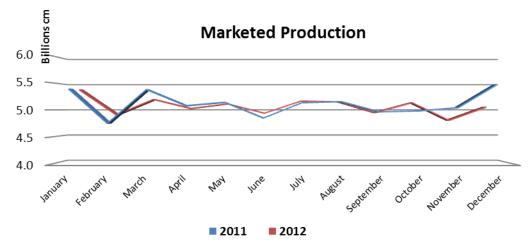
### **Data Quality Visual Check : Production and Consumption Time- Series**

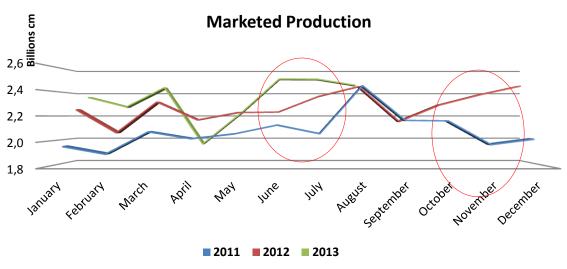




#### Visual check

#### Comparing recent data to the historical trend on a monthly basis

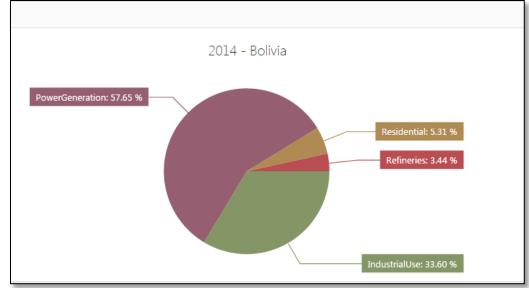


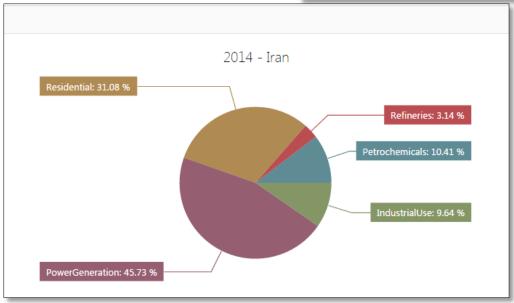


 When different trends is observed, data needs to be cheeked and clarification should be provided



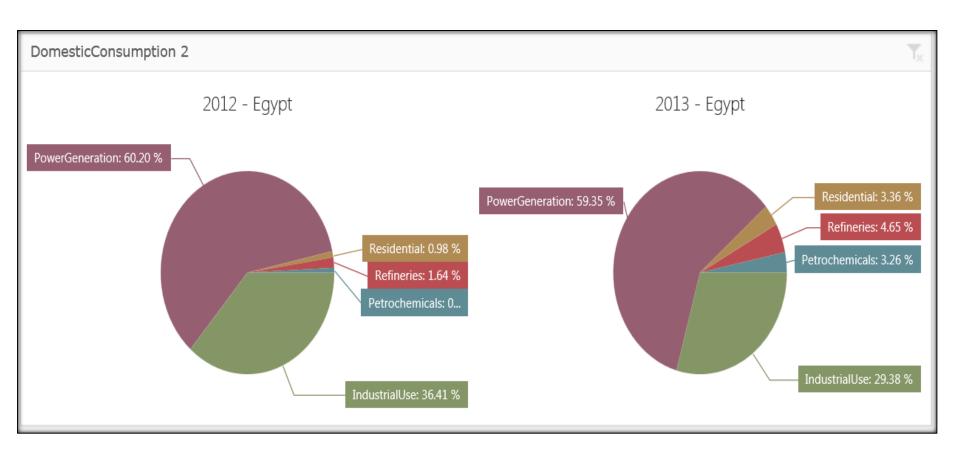
#### **Data Quality Visual Check: Domestic Consumption by Sector**







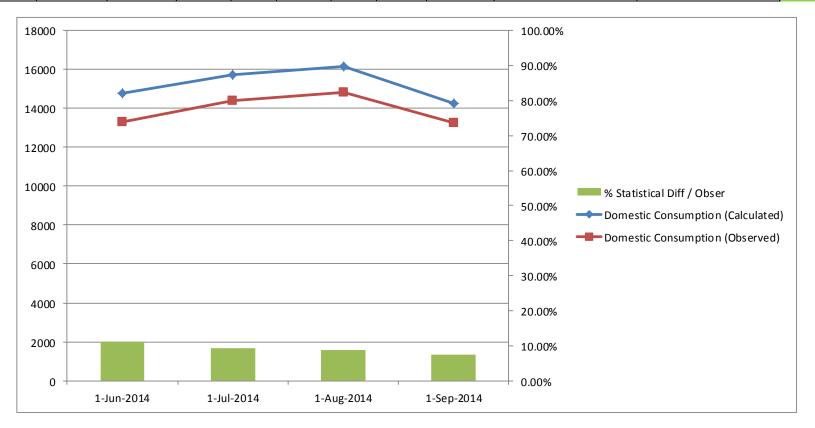
#### Data Quality Visual Check: Domestic Consumption by Sector





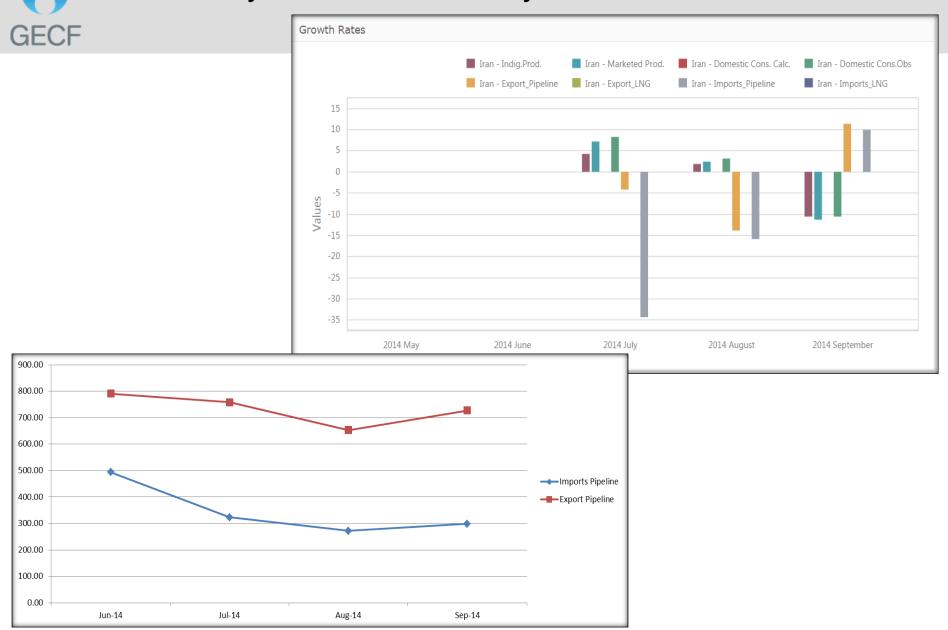
#### **Data Quality Visual Check: Statistical Difference**

Country	MQ Date	Market Production	Imports Pipeline		Export Pipeline	Export LNG		Statistical Difference	•	Domestic Consumption (Observed)	% Statistical Diff / Obser
Iran	1-Sep-2014	14676.9	298.8	0	727.2	0	-1	983.5	14249.5	13266	7.41%
Iran	1-Aug-2014	16545.63	272.18	0	653	0	0.8	1315.01	16164.01	14849	8.86%
Iran	1-Jul-2014	16177.35	323.795	0	757.95	0	-1.74	1343.885	15744.935	14401.05	9.33%
Iran	1-Jun-2014	15097.2	493.8	0	790.8	0	0	1497.9	14800.2	13302.3	11.26%



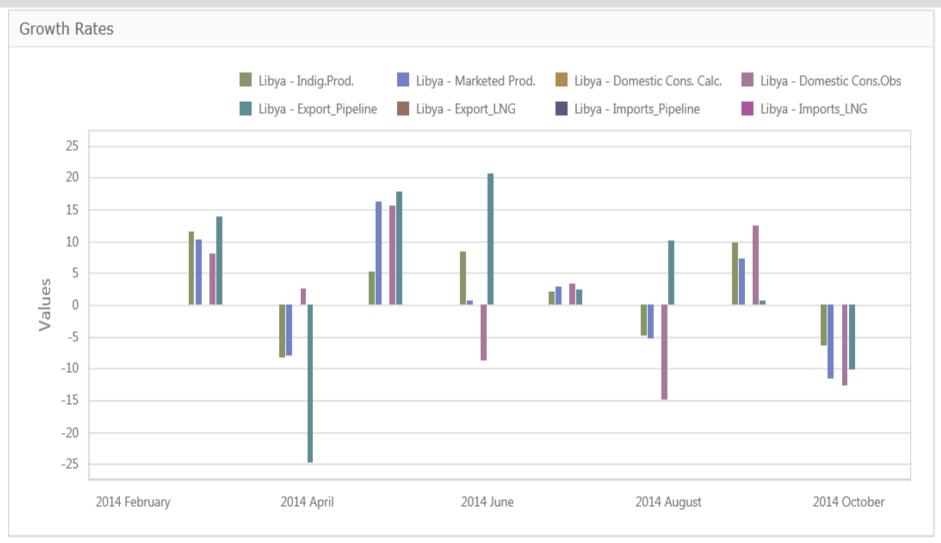


#### **Data Quality Visual Check: Monthly Growth Rate**





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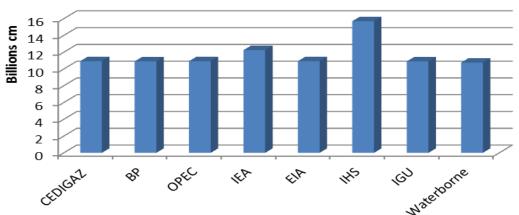




#### **Consistency with other energy statistics**

- The Data from other sources can allow to make comparisons, revisions, if necessary.
- A comparison with external sources can sometimes be useful, however we need to be careful:
  - ✓ What is the methodology, definition and approach of Data collection of the other source?
  - ✓ What is the interest of external sources (such as subscriptions, Companies report Data..)?
  - ✓ What is the level of transparency of the external sources?
  - Does the source have a particular motive to provide accurate data?
  - ✓ JODI Data are supposed to be official and a primary source from the Country to the JODI Database why would a secondary source be more correct?

#### LNG Exports, 2011



However this check can be useful to double check a suspicious number or check the order of magnitude, but should not be relied upon.



#### **Quality Indicators : Timeliness, Completeness, Data Confidence**

C 🔨 🦎	Data Quality Assessment							
Country	Country	Questionnaire	TimeLiness (Days)	Completeness (%)	Data Confidence (%)			
Bolivia	Egypt	2014 December	-2 ▼	95 🛦	95 🛦			
Egypt	Egypt	2014 November	-1 ▼	95 🛦	95 🛦			
Iran	Egypt	2014 October	-3 ▼	95 🛦	95 🛦			
Libya	Egypt	2014 September	-1 ▼	95 🛦	95 🛦			
Oman	Egypt	2014 August	-2 ▼	95 🛦	95 🛦			
Qatar	Egypt	2014 July	-3 ▼	90	95 🛦			
Q <b>T</b> <sub>x</sub> <b>5</b>	Iran	2014 September	23 🔺	91 🛦	0 🔻			
Month	Iran	2014 August	54 🔺	91 🛦	0 🔻			
January	Iran	2014 July	84 🔺	91 🛦	0 🔻			
February	Libya	2014 December	-32 ▼	93 🛦	0 🔻			
March	Libya	2014 November	-1 ▼	93 🛦	0 🔻			
April	Libya	2014 October	30 🔺	93 🛦	0 🔻			
Мау	Libya	2014 September	60 🔺	93 🛦	0 🔻			
June	Libya	2014 August	91 🔺	93 🛦	0 🔻			
Julie				^				

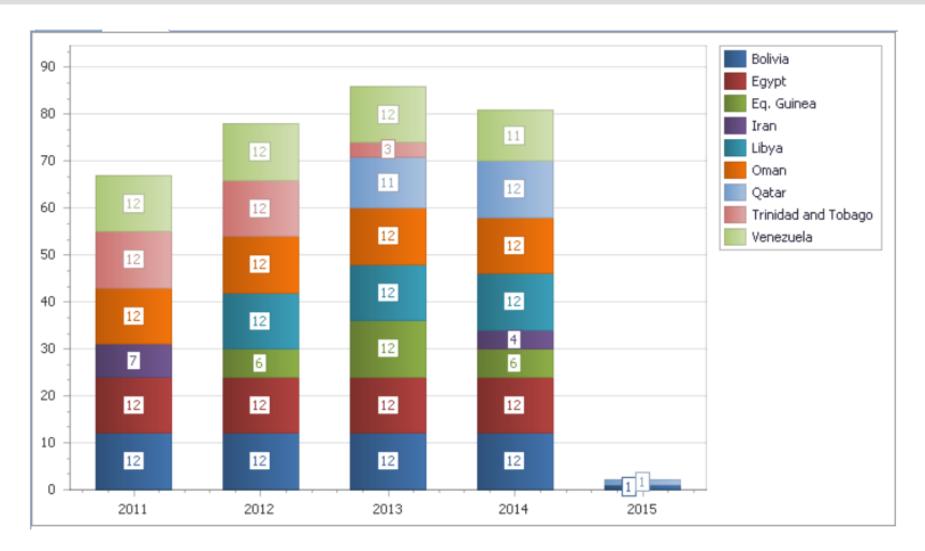


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Egypt	2014 October	-3 ▼	95 🛦	95 🛦
Egypt	2014 September	-1 ▼	95 🛦	95 🛦
Egypt	2014 August	-2 ▼	95 🔺	95
Egypt	2014 July	-3 ▼	90	95
Egypt	2014 June	0	95 🛦	95
Egypt	2014 May	0	90	95
Egypt	2014 April	-2 ▼	90	90 🗸
Egypt	2014 March	-1 ▼	90	80
Egypt	2014 February	-2 ▼	85 🔻	80
Egypt	2014 January	-1 ▼	95 🔺	90 🗸



#### **Quality Indicators: Sustainability Submission**





### **Quality Indicators : 2014 GECF Data Reporting Participation Statistics**

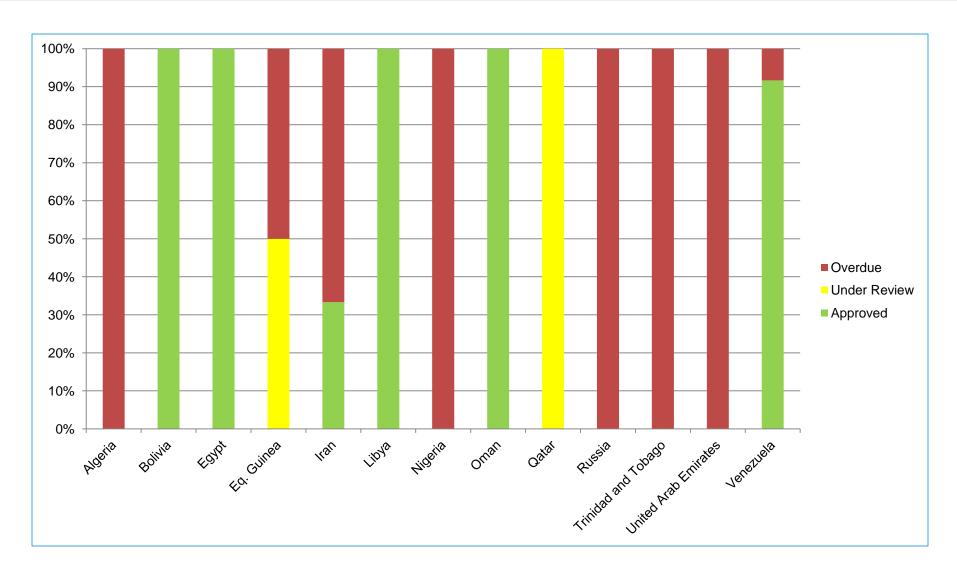
**5** countries submitted 12 monthly questionnaires during 2014 (100% participation):

1 country submitted 11 monthly questionnaires during 2014 (91% participation):

**2** countries with 50% or less participation:

**5** countries did not submit any monthly questionnaire data during 2014 (0% participation):







#### **Participation Assessment \_ Smiley Face Approach**

Data Quality	Sustainability, Timeliness, Completeness,				
Sustainability	Rates number of submissions within six-month period. JODI organizations proposed a fixed date to determine this rating				
Timeliness	Indicates whether submissions were submitted at the expected deadline (over a six months period)				
Completeness	Measures the number of expected data points in the questionnaire.				

Smiley Face Approach is a way to encourage countries to participate and/or improve their data

#### **Participation Assessment \_ Smiley Face Approach**

#### **Sustainability:**







8

#### **Timeliness:**

- Data are expected by 21st of the following month M-2







#### **Completeness:**









#### Participation Assessment \_ Smiley Face Approach -Q3&Q4 2014

From July 2014 to Dec 2014

Country	Sustainability	Timeliness	Completeness	Sustainability	Timeliness	Completeness
·			(%)			(%)
Algeria	0	0	0%	8		8
Bolivia	6	4	80%	<u>©</u>		<u> </u>
Egypt	6	6	93%	(C)		<b>©</b>
Eq. Guinea	0	0	0%	8	8	8
Iran	3	0	93%	(S)		<b>©</b>
Libya	6	2	93%	<u>©</u>	8	<b>©</b>
Nigeria	0	0	0%	8	8	8
Oman	6	3	90%	<u>©</u>	8	<b>©</b>
Qatar	6	5	40%	(C)	<u> </u>	8
Russia	0	0	0%	8	8	8
Trinidad and Tobago	0	0	0%	8	8	8
United Arab Emirates	0	0	0%	8	8	8
Venezuela	5	1	85%	<b>(2)</b>	8	<b>(1)</b>



#### **2014 GECF Data Reporting Participation Statistics**

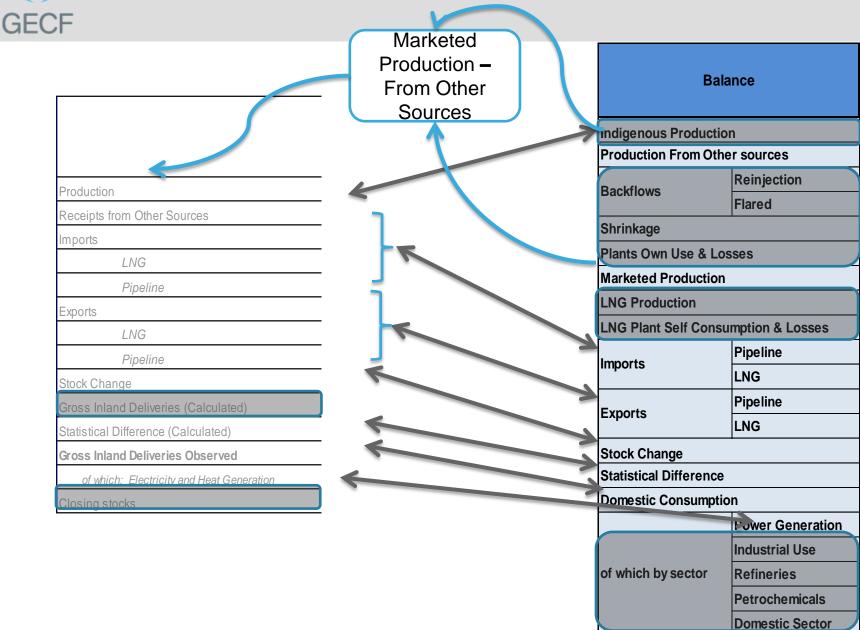
#### **Definitions:**

Overdue: was not received by GECF and the deadline date already passed. Under Review: received by GECFS and still under data quality check. Approved: received by GECFS, quality checked and approved.

Country	Approved	Under Review	Overdue
Algeria			12
Bolivia	12		
Egypt	12		
Eq. Guinea		6	6
Iran	4		8
Libya	12		
Nigeria			12
Oman	12		
Qatar		12	
Russia			12
Trinidad and Tobago			12
United Arab Emirates			12
Venezuela	11		1



#### **Mapping GECF to JoDI-Gas**



# Thank You for Your attention

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