

14th Regional JODI Training Workshop

9-11 November 2016, Moscow, Russia

The Extended JODI-Oil Questionnaire and JODI-Oil Manual 2nd Edition

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Outline

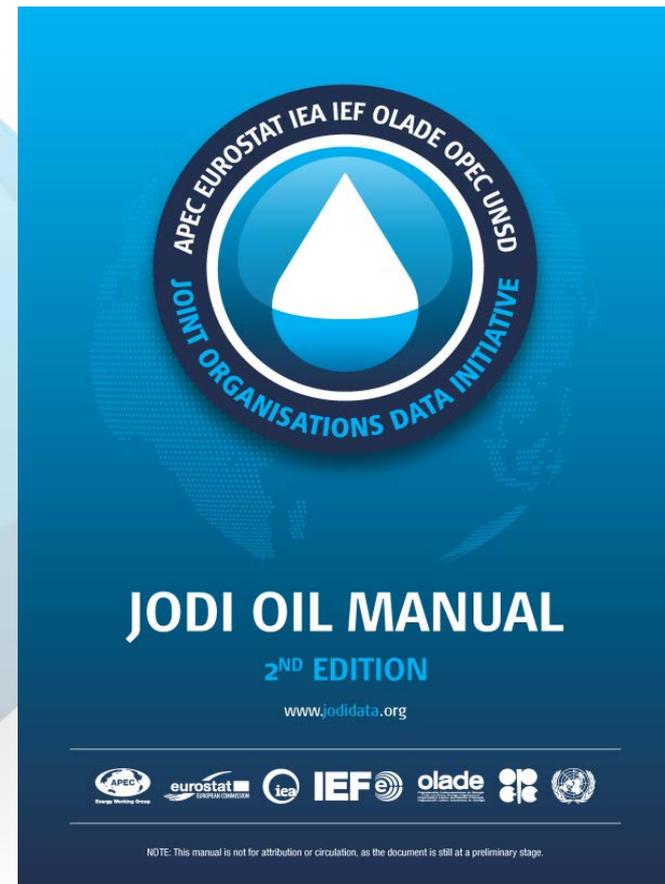
- Introduction
- Product categories definitions
- Flow definitions
- Common reporting mistakes
- **Feedback from participants**

Introduction

- Main objective of JODI is to have global information on major oil flows in a harmonized (to the extend possible) database
 - JODI oil database provides official data on monthly bases,
 - ‘Umbrella’ definitions for flows & product categories - simple to understand
- Main objective of this presentation
- Guidance on how to fill out the extended JODI Oil Questionnaire

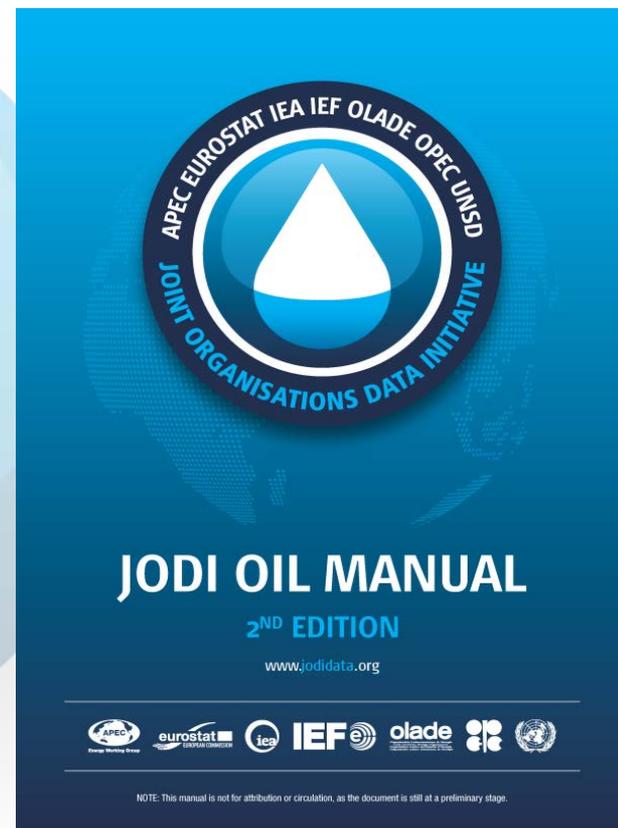
Introduction

- Presented definitions of products and flows are in line with **JODI Oil Manual 2nd Edition**
 - In practice, individual definitions of certain product categories & flows may differ from country to country
 - JODI Metadata



Content of JODI oil manual – 2nd edition

- Overview of the extended JODI Questionnaire
- Definitions of product categories and flows
- Verification of data quality
- Estimations and revisions of data
- Examples of practices from countries
- Database overview



Initial JODI oil data questionnaire

JOINT APEC/EUROSTAT/OECD-IEA/ OLADE/OPEC/UN DATA EXERCISE

A simple format (42 data points)

Country: _____
 Month: _____

Unit: _____

		Crude Oil	Petroleum Products					
			LPG	Gasoline	Kerosene	Gas/Diesel Oil	Fuel Oil	Total Oil
Production	month -1 & month -2	Country Output						
Imports		Imports						
Exports		Exports						
Stocks	Closing Change	Stocks	Closing Change					
Refinery Intake		Demand						

Choice of units left to organisations

Simple definitions

Expanding oil data collection

- Aim of the extended JODI oil questionnaire
 - Balance calculation
 - Data for specific products categories/flows of importance
 - Jet fuel
 - Naphtha
 - Direct use
 - Substantial amount of additional information, as compared to the initial questionnaire
 - Timeliness/accuracy of information should not suffer

JODI-oil data collection

- Monthly crude/product data (M-2) on
 - Production
 - Trade
 - Stocks
 - Refinery intake/output
 - Demand
- By main petroleum products
 - LPG, gasoline, kerosene, gas/diesel oil, residual fuel oil, total products
- More than 100 participating countries covering more than 95% of world oil production and consumption

Expanded oil data collection form

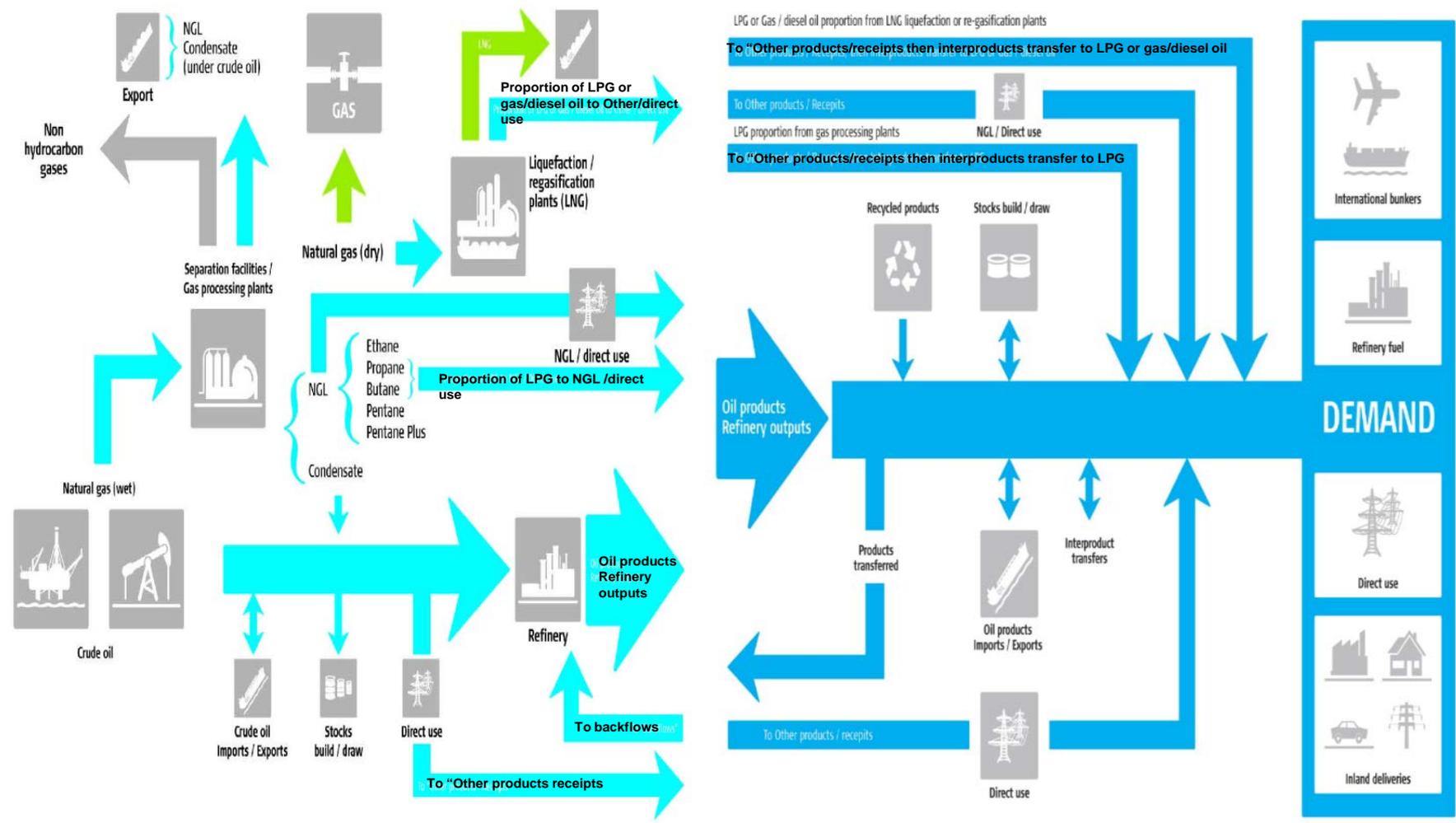
Country _____

Month _____

Unit : _____

	Crude Oil	NGL	Other	Total (1)+(2)+(3)	Petroleum Products								
					LPG	Naphtha	Gasoline	Total Kerosene	Of which: Jet Kerosene	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output								
+ From Other sources					+ Receipts								
+ Imports					+ Imports								
- Exports					- Exports								
Products Transferred + Backflows					- Products Transferred								
- Direct Use					+ Interproduct Transfers								
- Stock Change					- Stock Change								
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand								
Closing stocks					Closing stocks								

The extended JODI oil questionnaire



Timeliness

- **M-1: one-month old data**
(Example: On 25 November 2016, submitted data is for October 2016)
 - Not all countries able to collect all required data from sources
 - due to such limitations in the data collection system countries are reporting M-2
- **M-2: two-month old data**
(Example: On 25 November 2016, submitted data is for September 2016)
 - M-2 data more complete & available
- **Submission of M-1 data is encouraged**
- **Revision of M-2 and earlier data is encouraged**



Umbrella JODI definitions of petroleum product categories

Crude Oil

- Most important – but not the only – hydrocarbon from which oil products are manufactured
- Includes lease or field condensates for majority of countries; OPEC MCs exclude condensates
- Excludes NGL

	Crude Oil	Other	Total (1)+(2)+(3)		Petroleum Products								Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
					LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	
	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production				+ Refinery Output									
+ From Other sources				+ Receipts									
+ Imports				+ Imports									
- Exports				- Exports									
Products Transferred + /Backflows				- Products Transferred									
- Direct Use				+ Interproduct Transfers									
- Stock Change				- Stock Change									
- Statistical Difference	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake				= Demand									
Closing stocks				Closing stocks									

Natural Gas Liquids (NGLs)

- Liquid or liquefied hydrocarbons recovered from gas separation plants and gas processing facilities
- Mixture of ethane, propane, butane (normal and iso-), (iso) pentane and pentanes plus
- Produced in association with crude oil or natural gas and removed in field facilities or gas separation plants before sale of the gas

	Crude Oil	NGL	Total (1)+(2)+(3)		Petroleum Products								
					LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production				+ Refinery Output									
+ From Other sources				+ Receipts									
+ Imports				+ Imports									
- Exports				- Exports									
Products Transferred + /Backflows				- Products Transferred									
- Direct Use				+ Interproduct Transfers									
- Stock Change				- Stock Change									
- Statistical Difference	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake				= Demand									
Closing stocks				Closing stocks									

Issues

- Lease/field condensate
- Natural gasoline
- LPG from gas plants

Other primary products

Refinery feedstocks + Additives/oxygenates + Other hydrocarbons

- Refinery feedstocks: Oils/gases from crude oil refining/processing of hydrocarbons in the petrochemical industry, which are destined for further processing in the refinery without blending (naphtha, middle distillates, pyrolysis gasoline, heavy oils from vacuum distillation and petrochemical plants)
- Additives/oxygenates: Compounds added or blended with oil products to modify their properties (octane, cetane, etc.)
 - Biofuels (gasoline, diesel, jet/kero)
- Other hydrocarbons: Non-conventional oils (extra heavy oils, oil sands, oils extracted from coals, gas and oil shale) and hydrogen

	Crude Oil	Naphtha	Other ⁽³⁾		Petroleum Products							Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)	
					LPG	Naphtha	Gasoline	Total Kerosene	Of which: Jet Kerosene	Gas/ Diesel Oil	Fuel Oil		Other Products
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production				+ Refinery Output									
+ From Other sources				+ Receipts									
+ Imports				+ Imports									
- Exports				- Exports									
Products Transferred + /Backflows				- Products Transferred									
- Direct Use				+ Interproduct Transfers									
- Stock Change				- Stock Change									
- Statistical Difference	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake				= Demand									
Closing stocks				Closing stocks									

LPG

- Liquefied Petroleum Gas (LPG) is the generic name for commercial propane and commercial butane
- Produced in natural gas processing plants, oil refineries and as a byproduct in natural gas liquefaction plants

	Crude Oil	NGL	Other	Total (1)+(2)+(3)	Petroleum Products							
					Ethane	Gasoline	Total Kerosene	Of which: Jet Kerosene	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output							
+ From Other sources					+ Receipts							
+ Imports					+ Imports							
- Exports					- Exports							
+ Products Transferred /Backflows					- Products Transferred							
- Direct Use					+ Interproduct Transfers							
- Stock Change					- Stock Change							
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0
= Refinery Intake					= Demand							
Closing stocks					Closing stocks							

Issues

- Ethane
- Volumes of LPG reported in all flows of the JODI questionnaire include LPG from gas plants, except for the flow of refinery output

Naphtha

- Refined or partly refined light distillates with an approximate boiling point range of 27 to 221°C.
- Used as feedstock for catalytic reforming (octane number) or petrochemical feedstock

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products						
						LP Naphtha	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output							
+ From Other sources					+ Receipts							
+ Imports					+ Imports							
- Exports					- Exports							
Products Transferred + /Backflows					- Products Transferred							
- Direct Use					+ Interproduct Transfers							
- Stock Change					- Stock Change							
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0
= Refinery Intake					= Demand							
Closing stocks					Closing stocks							

Gasoline

- A mixture of relative volatile hydrocarbons , with or without small quantities of additives that have been blended to form a fuel suitable for use in internal combustion engines; it includes gasoline used in aviation

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products						
						LP Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output							
+ From Other sources					+ Receipts							
+ Imports					+ Imports							
- Exports					- Exports							
Products Transferred + /Backflows					- Products Transferred							
- Direct Use					+ Interproduct Transfers							
- Stock Change					- Stock Change							
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0
= Refinery Intake					= Demand							
Closing stocks					Closing stocks							

Issues

- Aviation gasoline
- Blending components, bioethanol
- Alcohol (ethanol/methanol)
- Natural gasoline (NGLs)

Kerosene and Jet/kerosene

- Kerosene comprises kerosene type jet fuel & other kerosene
- Other kerosene usually has lower quality specification than jet kerosene (used as domestic heating oil & for lighting)
- Jet kerosene needs to be reported separately
- Pure biofuels used directly in engines are not included

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Total Kerosene & Jet Kerosene								
						LPG	Naphtha	Gas	Kerosene	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)		
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
Products Transferred + /Backflows					- Products Transferred									
- Direct Use					+ Interproduct Transfers									
- Stock Change					- Stock Change									
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									

**Total Kerosene
&
Jet Kerosene**

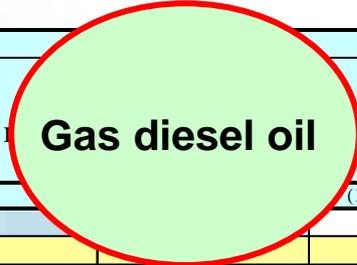
Issues

- International air bunkers

Gas diesel oil

- For automotive & other purposes
- Transport diesel
- Heating & other gasoil

	Crude Oil	NGL	Other	Total (1)+(2)+(3)									Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)	
						LPG	Naphtha	Gasoline	Gas diesel oil	Other Oil	Other Products			
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
Products Transferred + /Backflows					- Products Transferred									
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- Stock Change					- Stock Change									
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									



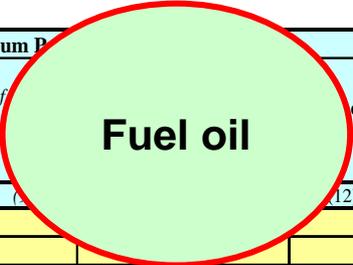
Issues

- International bunkers
- Electricity generation
- Gas oil/feedstock for petrochemical industry

Fuel oil

- Heavy residual fuel oil

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products						Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)		
						LPG	Naphtha	Gasoline	Total Kerosene	Other Kerosene	Jet Kerosene		Other Products	
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
Products Transferred + /Backflows					- Products Transferred									
- Direct Use					+ Interproduct Transfers									
- Stock Change					- Stock Change									
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									



Issues

- International bunkers
- Electricity generation

Other products

- ‘Other products’ include refinery gas, petroleum coke, paraffin waxes, bitumen, lubricants & others
- Double counting should be avoided (e.g. biofuels)
- Receipts and demand of “Other products” include direct use of crude oil and receipts of NGL and other hydrocarbons

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products							Other Products	Total (7)+(8)+(9)+(10)+(11)+(12)+(13)
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	F		
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
Products Transferred + /Backflows					- Products Transferred									
- Direct Use					+ Interproduct Transfers									
- Stock Change					- Stock Change									
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									

Umbrella JODI definitions of flows

Production

- In the JODI Oil questionnaire, production only applies to the primary side
 - Crude oil, NGL & other
 - Production of petroleum products refers to refinery output
- Marketable production, after removal of impurities but including quantities consumed by the producer in the production process

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Production					+ Refinery Output									
					+ Receipts									
					+ Imports									
- Exports					- Exports									
Products Transferred + Backflows					- Products Transferred									
- Direct Use					+ Interproduct Transfers									
- Stock Change					- Stock Change									
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									

From Other sources

- Additions to the supply of an energy product that have been already accounted for in the production of another energy form
 - Blending of liquid biofuels with motor gasoline, jet fuel/kerosene)
 - Gas to liquid or coal to liquid

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
From Other Sources					+ Refinery Output									
					+ Receipts									
					+ Imports									
					- Exports									
					- Products Transferred									
					+ Interproduct Transfers									
					- Stock Change									
	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									

Imports & Exports

- Quantities that physically crossed the international boundaries, whether or not customs clearance has taken place
- Excludes transits and amounts for international bunkers, which needs to be reported under 'demand'

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
- Stock change	0	0	0	0	- Stock change	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									

Imports/
ExportsImports/
Exports

Products transferred & Backflows

- Products transferred: Usually imported petroleum products reclassified as feedstocks for further processing, without delivery to final consumers e.g. naphtha imported for upgrading would be first reported as import of naphtha and then appeared also as products transferred of naphtha
- Backflows from the petrochemical industry: finished or semi-finished products returned from final consumers to refineries for processing, blending or sale

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other					+ Reclassification									
+ Imports					+ Products Transferred									
- Exports					- Backflows									
- Statistics	0	0	0	0	- Statistics	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									

Products Transferred/ Backflows

Products Transferred

Direct use

- Crude oil, NGL and other hydrocarbons which are used directly without being processed in oil refineries (e.g.: crude oil burned for electricity generation)
- Amount reported as direct use (crude, NGL & other hydrocarbons) should also be reported to receipts of other products
- Direct use would be counted under 'demand'

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
					- Products Transferred									
					+ Interproduct Transfers									
					- Stock Change									
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									

Direct Use

Closing stocks & stock changes

- Definition of stocks based on geographical location
- Closing Stocks: primary stock level at the end of the month on national territory; includes stocks held by companies, stock holding organizations & governments

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
	0	0	0	0		0	0	0	0	0	0	0	0	0

Stock Change

Closing Stocks

Stock Change

Closing Stocks

Refinery intake & output

- Refinery intake - total input of crude, NGL, condensates and feedstocks into atmospheric crude distillation unit.
- Refinery output – total amount of petroleum products produced from refinery input in a given period , excluding refinery fuel and loss

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products									
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)	
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
+ Production					Refinery output										
+ From Other sources															
+ Imports															
- Exports															
Products Transferred + /Backflows						- Products Transferred									
- Direct						+ Interproduct Transfers									
						- Stock Change									
	0	0	0	0		- Statistical Difference	0	0	0	0	0	0	0	0	0
						= Demand									
						Closing stocks									

Refinery intake

Receipts

Primary products receipts

quantities of indigenous or imported crude oil (and condensate) and indigenous NGL, which are used directly without being processed in a petroleum refinery (crude oil for electricity generation, NGL going to a gas plant - example)

Recycled products

Return of delivered product to supply without reclassification as another product (recovery of used lubricants/petrochemical backflows)

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production														
+ From Other sources														
+ Imports														
- Exports														
+ Products Transferred /Backflows														
- Direct Use					+ Imports									
- Stock Change					- Stock Change									
- Statistical Difference	0	0	0	0	- Statistical Difference	0	0	0	0	0	0	0	0	0
= Refinery Intake					= Demand									
Closing stocks					Closing stocks									



Receipts

Example

	NGL			LPG	Other oil products
Production	100		Refinery output	10	
Imports	25		Receipts		50
Direct use	50		Exports	5	
Stock Change	6		Interproduct transfers	50	-50
Statistical Difference	4		Stock Change	2	
Refinery Intake	65		Statistical Difference	-2	0
Closing Stocks			Demand	55	

Interproduct transfers

- Reclassification of products because their specification has changed, or because they are blended into another product: a negative sign indicates a product that will be reclassified, a positive sign shows a reclassified product. The total effects should be zero
- Example – jet kerosene which has deteriorated or has been spoiled may be reclassified as other kerosene

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
Products Transferred + /Backflows					- P									
- Direct Use														
- Stock Change														
- Statistical Difference	0	0	0			0	0	0	0	0	0	0	0	0
= Refinery Intake														
Closing stocks														

Interproduct Transfers

Demand

- Final consumers
- Energy transformation
- Energy producers
- International bunkers
- Including direct use of crude oil, NGL & other hydrocarbons

	Crude Oil	NGL	Other	Total (1)+(2)+(3)		Petroleum Products								
						LPG	Naphtha	Gasoline	Total Kerosene	<i>Of which: Jet Kerosene</i>	Gas/ Diesel Oil	Fuel Oil	Other Products	Total Products (5)+(6)+(7) +(8)+(10) +(11)+(12)
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
+ Production					+ Refinery Output									
+ From Other sources					+ Receipts									
+ Imports					+ Imports									
- Exports					- Exports									
Products Transferred + Backflows					- Products Transferred									
- Direct Use					+ International transfers									
- Stock Change														
- Statistical Difference	0	0	0	0		0	0	0	0	0	0	0	0	0
= Refinery Intake														
Closing stocks														

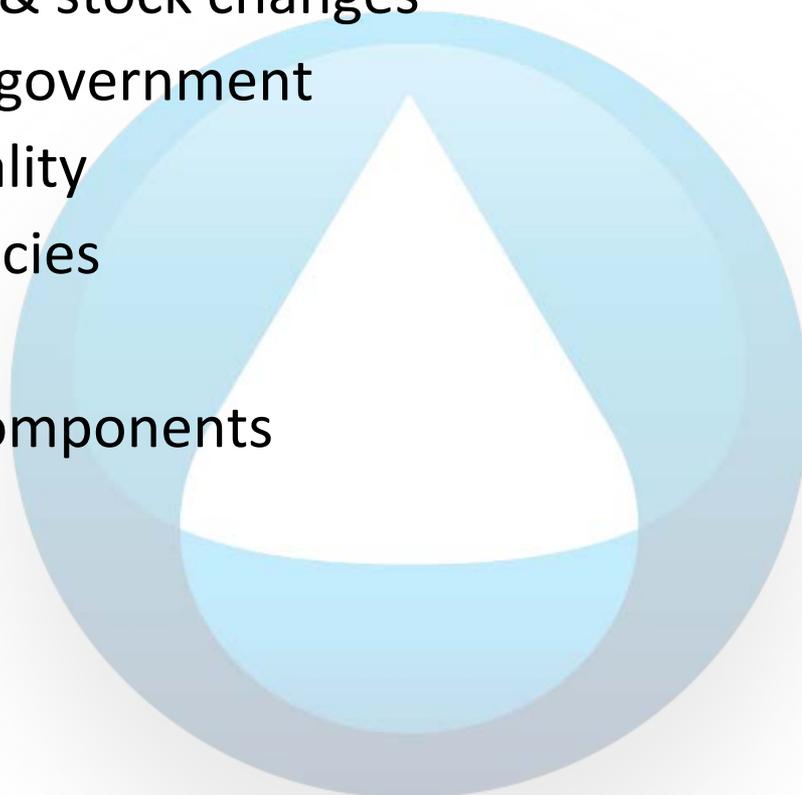
Demand

Issues on reported JODI data

- Crude production
 - Crude oil production of foreign companies operating within the country are reported as imports
 - Condensates
- Refinery intake
 - Condensates
- Refinery output
 - LPG from gas plants as refinery output
 - Double counting of semi-finished products
- Demand
 - Refinery fuel & international bunkers
 - Direct use
 - LPG & other products from gas plants
 - Biofuels

Issues on reported JODI data

- Closing stocks & stock changes
 - Industry & government
 - Confidentiality
 - Inconsistencies
- Gasoline
 - Blending components
 - Alcohol
 - Biofuels
- Kerosene
 - Jet fuel
 - Biofuels



Further issues - primary side

- **Sum of 'Total' (primary side)**
 - Total = crude oil + NGL + other
- **'Products transferred/backflows'** should be positive number
- **Refinery losses**
 - Refinery losses/gains = Refinery output of 'total products' minus total refinery intake
- **Statistical difference**
 - Production + from other sources + imports - exports + product transfers/backflows - direct use \pm stock change - refinery intake

Further issues - secondary side

- **'Products transferred'** should be positive number
- **Interproduct transfers** of 'total products' should be zero
- **Jet kerosene** amount should be smaller than (or equal to) 'total kerosene'
- **Sum of 'total products'**
 - Total products = LPG + naphtha + gasoline + total kerosene + gas/diesel Oil + fuel oil + other products
- **Statistical difference**
 - Refinery output + receipts + imports - exports - product transfers + interproduct transfers - stock change - demand

Thank you



For more information at www.jodidata.org

