

MAIN UPSTREAM DEVELOPMENT PROJECTS

SONATRACH ALONE

Project	Effluent	Provisional closing date
Project network gathering and put into production of 14 Wells of reservoir combi-orodivian of Hamra	Gas	December 2024
Full Development of Tinherth (connection of 73 Wells)	Natural Gas, Condensate, LPG	2024
Development of Tinherth (separation and of acidation unit)	Natural Gas, Condensate, LPG	2025
Tout Phase 2	Natural Gas, Condensate, LPG	2024

SONATRACH WITH INTERNATIONAL PARTNERS

Project	Partners	Effluent	Provisional closing date
Hassi Bir Rehalil BOG-REZMAS-	PTTPEZ / CNOOC	Crude Oil	2027

DOMESTIC GAS PIPELINES

From / To	Code	Diameter	Length (Km)	Date
Hassi R'Mel - Arzew	GZ0	20"24"	509	1981
Hassi R'Mel - Skikda	GK1	40"	575	1971
Gassi Touil - Hassi Messaoud	GM1	40"	150	1978
Hassi R'Mel - Arzew	GZ1	40"	507	1978/1979
Hassi R'Mel - Isser	GG1	42"	437	1981
Hassi R'Mel - Arzew	GZ2	40"	511	1982
Alrar - Hassi R'Mel	GR1	42"48"	966	1986
Hassi R'Mel - Arzew	GZ3	42"	511	1989
Alrar - Hassi R'Mel	GR2	42"48"	966	1999
Hassi R'Mel - Skikda	GK2	42"	575	2001
In Salah - Hassi R'Mel	GR3	48"	520	2003
Hassi R'Mel - Arzew	GZ4	48"	513	2009
Souqouar - Hadjret Ennouar	GZ4	42"	277	2009
Moda Douz - Beni Saf	GZ4	48"	120	2010
Hassi R'Mel - El Kala	GK3	48"	899	2012
Tamouka - Skikda	GK3	48"	87	2012
Rhoude Nouss - Hassi R'Mel	GR4	48"	335	2014
Régane - Kouchba - Hassi R'Mel	GR5	48"	770	2017
Rhoude Nouss - Hassi R'Mel	GR6	48"	531	2017
PCA GR5 - Hassi R'Mel	GR7	48"	345	2020
PCS Kermadja - Arzew	RGZ3	42"	110	2018
TD Medjedel / GG1 - Bordj Menail	RGG1	42"	208	2020
SC4 Souqouar - Arzew	RGZ2	40"	223	In Project
SC4 Souqouar - SCS Kermadja	RGZ3	42"	104	In Project

INTERNATIONAL GAS PIPELINES

From / To	Code	Diameter	Length (Km)	Date
Hassi R'Mel - Italy (Sicily)	GO1	48"	549	1982
Hassi R'Mel - Italy (Sicily)	GO2	48"	549	1987
Hassi R'Mel - El Alcha - Beni Saf	GPDF/EGPDF	48"	719	1999/2022
Hassi R'Mel - Italy	GZ3	48"	549	2006/2009
Beni Saf - Spain (Almeria)	MEDGAZ	24"	200	2010

OIL PIPELINES

From / To	Code	Diameter	Length (Km)	Date
Houad El Hamra - Bejaia	OB1	24"72"	668	1959
In Amenas - Tunisia	OT1	24"	265	1960
Houad El Hamra - Arzew	OZ1	28"	801	1955
Houad El Hamra - Skikda	OK1	34"	845	1972
Meslar - Houad El Hamra	OHP	28"	108	1972
El Borma - Meslar	OD1	20"	272	1977
In Amenas - Houad El Hamra	OH1	30"	630	1982
Ri Rebaa North - Meslar	OD2	20"	230	1997
Hassi Berkine - Houad El Hamra	OH3	30"	292	1999
Rhoude El Baguel - Meslar	OD3	20"	33	1999
Houad El Hamra - Arzew	OZ2	34"	821	2003
Beni Mansour - Algiers	OS1	30"	145	2005
Hassi Berkine - Houad El Hamra	OH4	30"	292	2006
Houad El Hamra - SP1 Bis Djemaa	ROB1	24"	191	In Project
M'Sila - Bejaia	ROB1	24"72"	174	2020/2022
El Borma - PC1/PC137	ROD1	16"	137	In Project
In Amenas - Orlanet	ROH1	24"	112	In Project

LPG PIPELINES

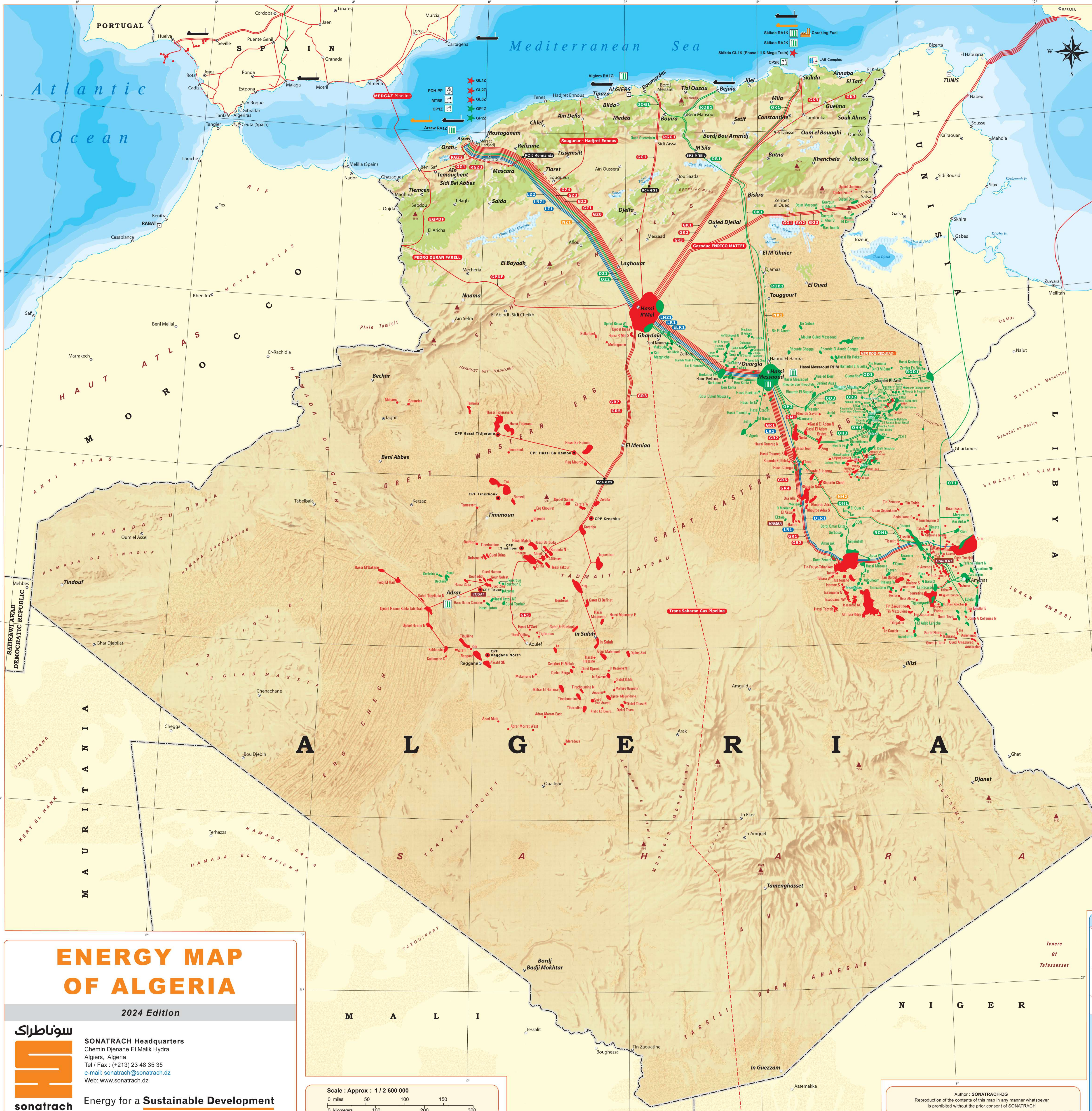
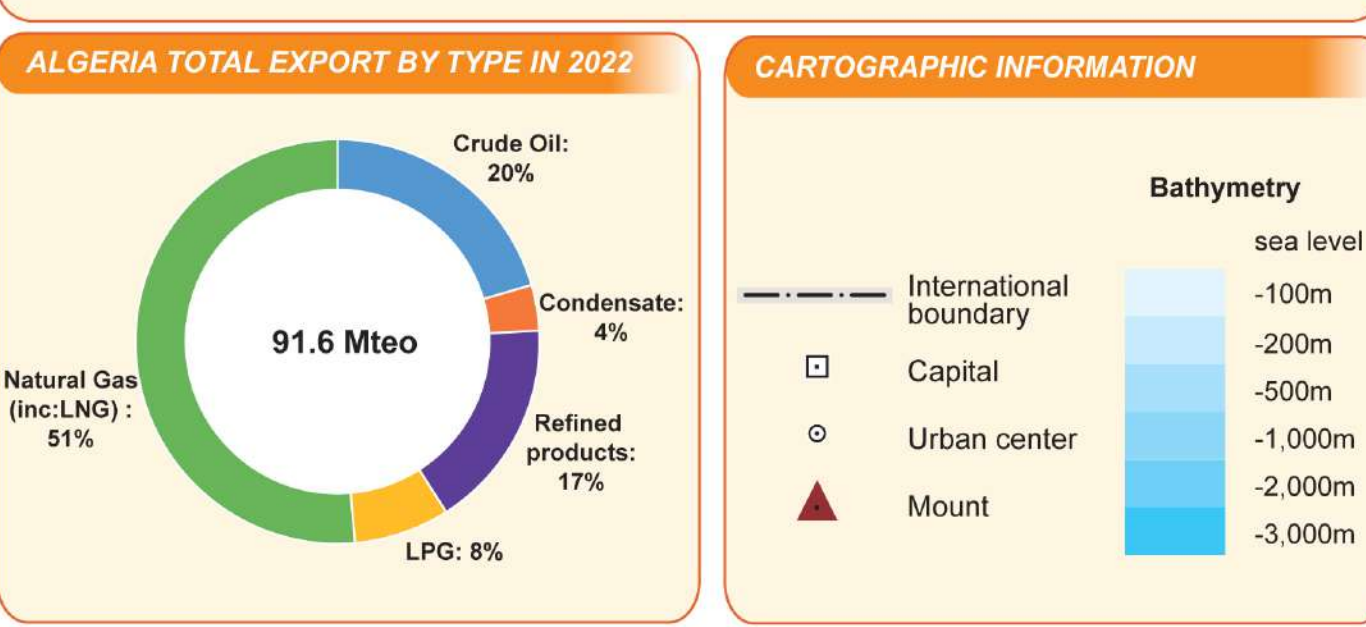
From / To	Code	Diameter	Length (Km)	Date
Hassi R'Mel - Arzew	LNZ1	16"	495	1973
Hassi R'Mel - Arzew	LZ1	24"	503	1984
Alrar - Hassi R'Mel	LR1	10"72"	989	1996
Orlanet - Gassi Touil	LD1	16"	454	2004
Hassi R'Mel - Arzew	LZ2	24"	495	2009
Hassi Messaoud - Hassi R'Mel	ELR1	24"	338	2014

CONDENSATE PIPELINES

From / To	Code	Diameter	Length (Km)	Date
Ohanet - Houad El Hamra	NH2	24"70"	565	1960
Houad El Hamra - Skikda	NK1	30"	646	2009
Hassi R'Mel - Arzew	NZ1	28"	507	1973

LEGEND

Gas Field	Gas Processing Facility
Oil Field	Oil Tanker import/export terminal
Oil Pipeline	LNG export Plant existing
Gas Pipeline	Helium Plant
Gas Pipeline under construction or planned	Petrochemical Plant
LPG Pipeline	MTBE
Condensate Pipeline	Oil Refinery
Oil Refinery	LAB Complex
Refinery In Project	Cracking Fuel Planned
Cracking Fuel Planned	Upstream Projects in Partnership
Upstream Projects in Partnership	Upstream Projects Sonatrach Alone



LIQUEFACTION (LNG) PLANTS

ARZEW GL12	ARZEW GL2Z	ARZEW GL3Z
Location: Arzew	Location: Arzew	Location: Arzew
Area: 72 hectares	Area: 72 hectares	Area: 70 hectares
Products: Liquefied natural gas and gasoline	Products: Liquefied natural gas, Butane, Propane, Gasoline and feed gas to HELISON	Products: Liquefied natural gas, Butane, Propane, Gasoline and feed gas to HELISON
Number of trains: 6	Number of trains: 6	Number of trains: 1
Date of first LNG production: 1978	Date of first LNG production: 1981	Date of first LNG (MEGA TRAIN) production: 2014
Capacity: LNG: 17.50 millions only Gasoline: 110,000 tpy	Capacity: LNG: 17.82 millions only Propane: 410,000 tpy Butane: 327,000 tpy Gasoline: 196,000 tpy Gas enriched in helium: 224.3 millions Nm ³ and feed gas to HELISON	Capacity: LNG: 9.57 millions only Propane: 248,600 tpy Butane: 62,438 tpy Gasoline: 47,000 tpy Ethane: 300,000 tpy Gas enriched in helium: 115.5 millions Nm ³ and feed gas to HELISON

LPG SEPARATION PLANTS

ARZEW GP1Z	ARZEW GP2Z
Location: Marsat El Hadjadj	Location: Arzew
Area: 120 hectares	Area: 13.5 hectares
Products: Propane (57%), and Butane (43%)	Products: Propane (57%), and Butane (43%)
Process Used: Distillation under pressure	Process Used: Distillation under pressure
Number of trains: 9	Number of trains: 2
Date of first production: 4 Trains Phase I: 1983 2 Trains Phase II: 1986 3 Trains Phase III: 2010	Launching date for production: 1974 Production Capacity: 1.4 millions tons of LPG per year
Production Capacity: 9.0 millions tons of LPG per year	

REFINERIES

ALGERS REFINERY-RA1G	SKIKDA REFINERY-RA1K
Location: Sidj Arine at east of Algiers	Location: Skikda
Area: 200 hectares	Area: 295 hectares
Launching date for production: 1964	Launching date for production: 1980
Treatment capacity: 3,57m tpy of "BHM" increased at 3.7m tpy after rehabilitation (2012)	Constructor of reforming 2: 1990, by JGC
Finished products: LPG (Propane, Butane), Naphta, Kerosene, Gas-oil, Fuel oil, Clary	Launching date for production: 1980 Treatment capacity: 15m tpy of "BHM" increased to 16.5m tpy after rehabilitation (2012) and 27.000 tpy of "BRI"
	Finished products: LPG (Propane, Butane), Naphta, Kerosene, Gas-oil, Fuel oil, Aromatics and Bitum

SONATRACH ALONE

Complex	Start up	Location	Capacity (thousand tpy)	Other units	Shareholders
CP1Z	1976	Arzew	100	Methanol, Revars & MTBE	SH: 100%
CP2K	2005	Skikda	130		SH: 100%

The new petrochemical projects in own effort: ethylene unit of Skikda, Benzene Linear alkyl complex of Skikda and MTBE facility of Arzew 200

SONATRACH IN PARTNERSHIP

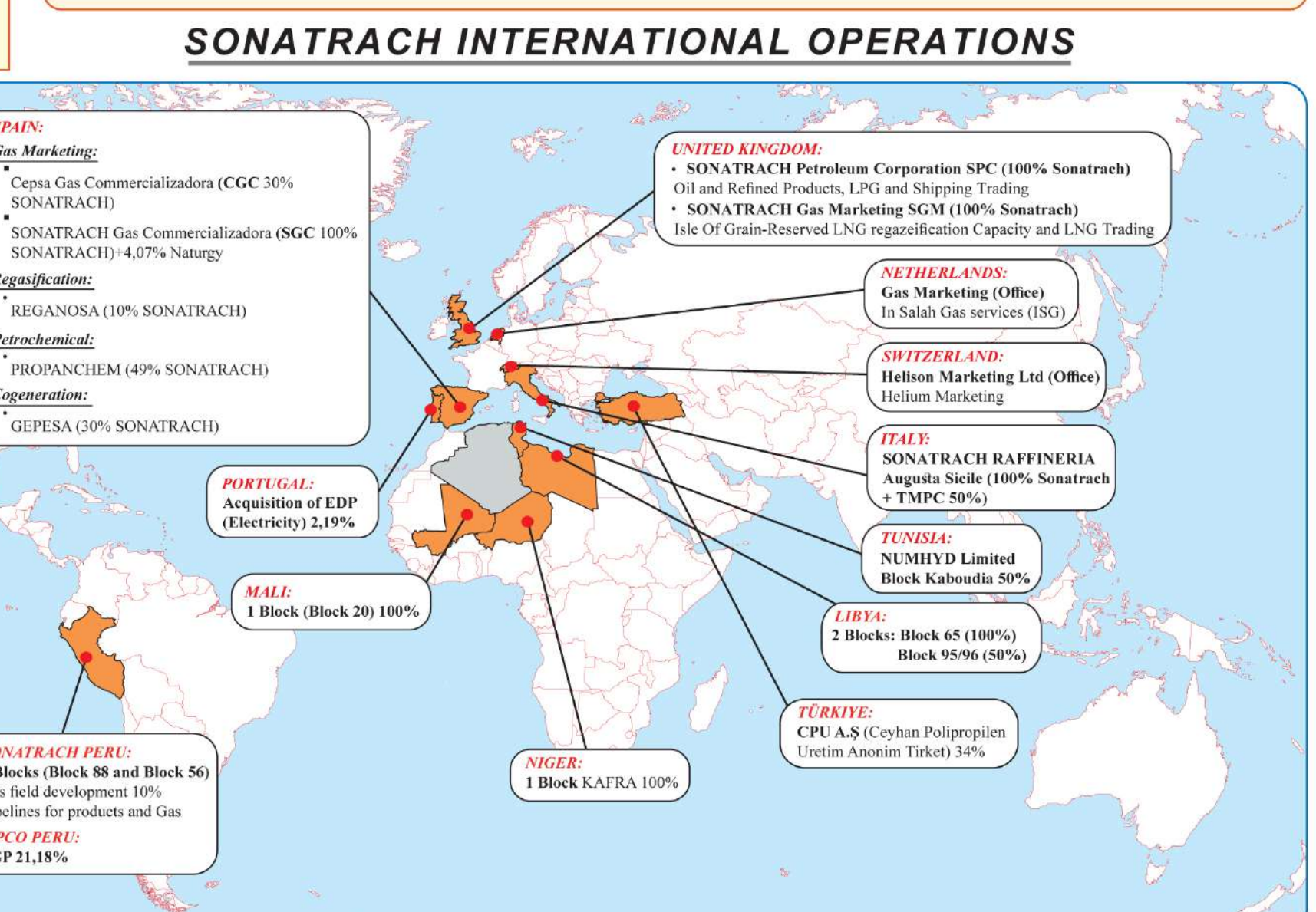
Complex	Start up	Location	Capacity (million tpy)	Other units	Shareholders
Arzew I: SORFERT (Armonia)	2013	Arzew	1.45	Urea (1.14 millions tpy)	GRASCOM
Arzew II: ACA' (Armonia)	2013	Arzew	1.32	Urea (2.31 millions tpy)	SBGH

The new petrochemical projects in partnership are:

- PDH-PP complex of Arzew (Propane dehydrogenation and polypropylene production);
- Steam cracker complex Ethane /LPG Arzew;
- Skikda PTA / PET complex (Purified Terephthalic Acid / Poly Ethylene Terephthalate);
- Methanol and derivatives complex of Arzew

HELIUM PLANTS

Technical data sheet	HELIOS	HELISON
Location	Arzew (within the perimeter of GL2Z)	Skikda (within the perimeter of GL1K)
Supply:	Feed gas from GL2Z plant	Feed gas from GL1K plant
Products:	Liquefied helium and nitrogen (liquid & vapour)	Liquefied helium and nitrogen (liquid & vapour)
Process used:	Air products	Linde AG Germany
Number of trains:	2	1 Helium extraction and separation line
Date of first production:	1995	2009
Production capacity:	16.08 millions only Helium 33,000 tpy Nitrogen	17,70 millions only Helium (0.68m cf) 33,000 tpy Nitrogen
Storage capacity	2x113,500 Helium litres 2x75,700 Nitrogen litres	2x113,500 Helium litres 250,000 Nitrogen litres



ENERGY MAP OF ALGERIA

2024 Edition

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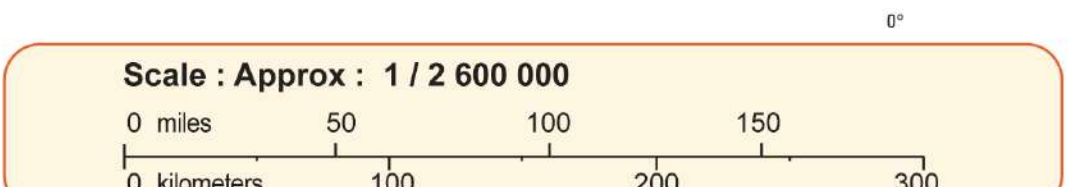
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