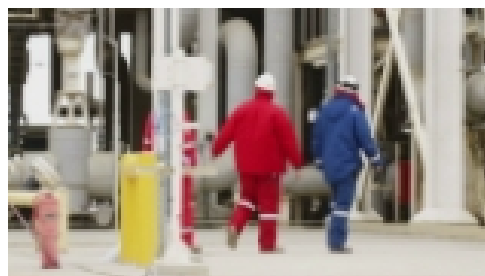


EU Energy (part 1) - 2012

Type: [Stockshots \[long\]](#) Référence: [1072796](#) Durée: [52:38](#) Lieu: [Algeria](#) | [Moscow](#) | [Baku](#) | [Kiev](#) | [Tbilisi](#) | [Libya](#) | [Antwerp](#) | [Budapest](#) | [Fos-sur-Mer](#) | [Egypt](#) | [Norway](#)

ENSURING SAFE AND SECURE ENERGY FOR EUROPE Efficient energy production, transport and storage are the cornerstones of a secure, sustainable and competitive energy policy. Modern and pan-European infrastructure, be it gas and oil pipelines, wind parks, and bioenergy, solar or nuclear plants, ensures the security of energy supply for all European citizens. Europe has identified shortcomings in its energy network and priority routes for electricity transmission and oil and gas distribution. The EU is now focusing on investing and building the infrastructure of the future. At the same time, it is investing in research and in demonstration projects to make sure that the best energy technologies find their way to the market. This is even more important with a view to the 20-20-20 climate objectives. Their achievement requires smart grids capable of integrating energy coming from renewable sources. Rebuilding our energy system for a low-carbon future is not just a task for the energy industry. Technological improvements, greater efficiency, resilience to a changing climate and new flexibility will be necessary. This is not a task which a single Member State can achieve on its own.



HEURE	DESCRIPTION	DUREE
00:00:00	Credits and title	00:00:18
00:00:18	1. OIL AND GAS SUPPLY	00:00:59
00:00:18	Title Crude oil in the EU: Given the limited reserves of oil in the Member States, the EU is a net importer of crude oil. Net imports comprised the largest share of crude oil inputs into EU refineries. However, in refined petroleum products EU27 imports and exports are close to balance: the EU has to import gasoil (mainly from the Russian Federation), while it exports its excessive gasoline (mainly to the United States of America) Natural gas in the EU: Natural gas is the most environmentally friendly fuel. In 2004, natural gas accounted for 1/4 of Europe's energy mix (EU-27), or some 550 billion cubic metres. According to forecasts, European demand should reach 639 billion cubic metres in 2015, and 771 billion cubic metres in 2030. LNG currently covers 9% of demand and is forecast to account for more than 30% of European natural gas consumption by 2030. (Source: BP Statistics). By today's estimates the global supply of natural gas is secured until 2070. In	00:00:05

	<p>global supply of natural gas is secured until 2030. In 2009, global output of natural gas amounted to some three thousand billion cubic meters. EU external dependency for its supply in natural gas is around 60%. Natural gas imports cover 62% of current European demand and should continue to rise. By 2030, they are expected to account for 84% of supplies.</p>	
00:00:23	TITLE: GENERAL VIEWS OF BAKU IN AZERBAIJAN	00:00:01
00:00:24	General views of Baku: Flame Towers, Maiden Tower, Istiglaliyyat Street and Azpetrol office (9 shots)	00:00:53
00:01:17	2. OIL AND GAS MAIN INDUSTRY	00:06:27
00:01:17	TitleThe export pipelines transport oil and gas from Sangachal Terminal to Azerbaijani border and then to Turkey through Georgia for transshipment. The Azerbaijan export pipelines consists of three pipelines: BTC (Baku Tbilisi Ceyhan), SCP (South Caucasus Pipe) and WREP (Western Route Export Pipeline)) and five facilities IPA-1 (BTC Intermediate Pigging Azerbaijan), PSA-2 (BTC Pump Station Azerbaijan-2), PS-2 (Pump Station), PS-5 and PS-8 located in different regions of Azerbaijan along the pipelines RoW (Right of Way).	00:00:05
00:01:22	Views of abandoned derricks in the Caspian sea (5 shots)	00:00:27
00:01:49	Views of a sign where it is written Socar - Gaz processing plant (2 shots)	00:00:12
00:02:01	TITLE: BP SANGACHAL OIL AND GAS TERMINAL - AZERBAIJAN	00:00:05
00:02:06	View of a sign where it is written Welcome to Sangachal Terminal	00:00:05
00:02:11	General views of the Sangachal Terminal: flame over the terminal, people at work, pipes in the main terminal, turbines, crude oil tanks (8 shots)	00:00:51
00:03:02	TITLE: BAKU TBILISI CEYHAN - PUMP STATION AZERBAIJAN 2	00:00:05
00:03:07	Road sign given the direction to pump station	00:00:05
00:03:12	General views of the pump station: unused pipeline sections at PSA2; tanks in pumping station; station equipment; pipe connection; workers, inside the pump station, closing valve; pump station control room (11 shots)	00:00:59
00:04:11	TITLE: HAND-DUG OIL WELLS - AZERBAIJAN	00:00:05

00:04:16	Hand-dug wells at Bibiheybat (4 shots)	00:00:23
00:04:39	Workers at hand-dug wells in Balakhany	00:00:06
00:04:45	Hand-dug wells (7 shots)	00:00:42
00:05:27	Tractor and workers at Balakhany wells (2 shots)	00:00:12
00:05:39	TITLE: GENERAL VIEWS OF TBILISSI, GEORGIA	00:00:05
00:05:44	General views of Tbilissi: City centre; Bridge of Peace; Europe Square; Freedom Square; Metekhi temple (6 shots)	00:00:31
00:06:15	TITLE: PUMP STATION GEORGIA 1 - TBILISSI	00:00:05
00:06:20	General views of the pump station: Warning sign; main chimney stacks; metering equipment and pipes; storage tanks in snow; workers inside the pump station; control room (15 shots)	00:01:24
00:07:44	3. MOSCOW - RUSSIA	00:02:06
00:07:44	Title	00:00:05
00:07:49	General views of Moscow: Kremlin; Red Square; Tverskaya Street; New Arbat Avenue (5 shots)	00:00:27
00:08:16	TITLE: MAJOR GAS COMPANIES IN MOSCOW, RUSSIA	00:00:05
00:08:21	Gazprom headquarters building (3 shots)	00:00:16
00:08:37	Gazprom Neft headquarters building (2 shots)	00:00:10
00:08:48	Lukoil headquarters building (3 shots)	00:00:16
00:09:04	Rosneft headquarters building (3 shots)	00:00:15
00:09:19	TITLE: THERMAL POWER STATION IN MOSCOW, RUSSIA	00:00:05
00:09:24	Generation station (2 shots)	00:00:10
00:09:33	Thermal power station (3 shots)	00:00:17
00:09:50	4. KIEV - UKRAINE	00:01:24
00:09:50	Title	00:00:05
00:09:55	General views of Kiev: Ukrainian flags; Ministry for Foreign Affairs; St. Andrew's Church; Independence Square; Motherland monument; Kiev-Pecherskaya Laura (12 shots)	00:01:19
00:11:14	5. GAS SUPPLY: ZAWIA AND MELLITAH - LYBIA	00:01:53

00:11:14	TitleZawia is located on the Libyan coast, 70 km west of Tripoli. This is a storage complex, no gas is loaded here.Mellitah is located 20 km from the city of Zwara (Western Libya), in activity since 2005. The complex is owned 51% by the National Oil Company (NOC) and 49% by the Italian Major ENI. It receives raw gas from Wafa fields (500 km south) and from the Sabbratha platform. It takes the C5 away from it and dispatches LNG to Europe through an undersea pipeline named Green Stream, directly to Sicily.	00:00:05
00:11:19	General views of Zawia: Libyan flag; tanks; a man making gas pressure test (5 shots)	00:00:28
00:11:47	Sign where it is written Mellitah (2 shots)	00:00:11
00:11:58	Incoming pipelines (2 shots)	00:00:11
00:12:09	Pipelines and tanks (3 shots)	00:00:20
00:12:29	Sign where it is written Green Stream Gas Pipeline	00:00:13
00:12:41	Close up on pipeline going to Sicily	00:00:06
00:12:47	Loading berth and pumps for tankers (3 shots)	00:00:20
00:13:07	6. GAS SUPPLY: HASSI R'MEL AND ARZEW - ALGERIA	00:05:29
00:13:07	Sonatrach was created in 1963, directly after the independence of the Country. The entire Algerian network belongs to Sonatrach that is also involved with a 51% share in the production of foreign companies present in Algeria (ENI, BP, Total, etc.). Gas and oil production represent around 95 % of the Algerian State incomes, of which around 70 % comes from gas exports alone.Hassi R'mel is located in the centre of Algeria, 800 km from Algiers. It is the third largest gasfield in the world. It produces over 150 million m ³ of gas per day.Some 48 inches diameter gas pipelines are directly linked with Spain (GPDF pipeline) and Italy (GK3 pipeline) which transport 350 million m ³ /day.Arzew is a seaside complex belonging to Sonatrach. It is the largest exportation site from the country. The complex was built during the 1970's, it is located 30 km to the East from Oran.. This mega-complex is specialized in exporting Liquid Natural Gas and Methane, nearly exclusively to Spain, Italy, Belgium, Greece, France and Turkey. All the new technologies like helium, ammoniac, aluminium production facilities are also part of Arzew complex. A new project is on its way in order to raise production and exportation in the future. Sonatrach is currently building a new terminal (GNI -37) to be operational in 2013. The	00:00:05

	terminal (CNDG) to be operational in 2010. The exporting facilities are composed of 1 undersea pipeline to Spain and 6 loading berths. The total capacity for gas exportation is 50 million m ³ / year. Each tanker has a capacity from 70.000 to 240.000 m ³ . Loading capacity is 5.000 to 10.000 m ³ / hour.	
00:13:12	Drilling well HR16 (5 shots)	00:00:32
00:13:44	Incoming pipelines from drilling wells to the refinery (2 shots)	00:00:10
00:13:54	Master Control Room (5 shots)	00:00:30
00:14:24	Boosting unit (9 shots)	00:00:57
00:15:22	Liquid gas tanks (2 shots)	00:00:11
00:15:32	Views of the "Centre National de Dispatching Gaz" (CNDG) (4 shots)	00:00:27
00:15:59	Arzew: General views of the facilities (7 shots)	00:00:35
00:16:34	Loading berth and pumps handling gas to the tankers (4 shots)	00:00:20
00:16:54	Tanker loading gas at berth (8 shots)	00:00:47
00:17:41	Views of the tanker "Mourad Didouche" with a capacity of 125.000 m ³ and a length of 300 meters (6 shots)	00:00:35
00:18:16	Delta Tanker at berth (2 shots)	00:00:10
00:18:26	General views of Arzew: port facilities and storage (2 shots)	00:00:10
00:18:36	7. OIL SUPPLY: ZAWIA AND MELLITAH - LIBYA	00:02:04
00:18:36	TitleZawia is located on the Libyan coast, 70 km west of Tripoli. A terminal is available for loading of tankers. The loading system consists in bringing the crude oil to the tankers through an off shore pipeline. There is no refinery here; tankers are loading semi-treated crude oil and diesel to be delivered all around the world.Mellitah is located 20 km from the city of Zwara (Western Libya). The complex is owned at 51% by the National Oil Company (NOC) and at 49% by the Italian Major ENI. It receives crude oil from the Wafa fields, stores it and loads it onto tankers from all over the world.	00:00:05
00:18:41	General views of tanks - The larger tanks have a capacity of 1.000.000 m ³ (5 shots)	00:00:25
00:19:06	Pipelines in direction of the sea (2 shots)	00:00:11

00:19:17	Tanker attached to a floater, loading crude oil	00:00:05
00:19:22	Control Room (2 shots)	00:00:16
00:19:38	Mellitah: Incoming pipelines (3 shots)	00:00:22
00:20:00	Tanks	00:00:06
00:20:07	Pipelines to loading pier	00:00:05
00:20:12	Pier pipeline	00:00:10
00:20:22	Loading pier (2 shots)	00:00:12
00:20:34	Tanker waiting for permission to access loading pier	00:00:06
00:20:40	8. OIL SUPPLY: EL HAMRA - EGYPT	00:01:35
00:20:40	Title El Hamra terminal is located 40 km away from the city of Alexandria. It belongs to WEPCO, an Egyptian company specialized in storage and shipping of crude oil. The terminal counts 4 storage tanks with a total capacity of 1 million barrels. The total quantity of crude oil exported from El Hamra terminal was in 2011 a total of 19.67 million of barrels. Tankers using the facility here have a capacity from 350.000 to 600.000 barrels. Average loading time is 24 hours.	00:00:05
00:20:45	General view of El Hamra Terminal	00:00:06
00:20:51	Sign « El Hamra Terminal District »	00:00:07
00:20:58	Incoming pipeline	00:00:06
00:21:04	Metering system (3 shots)	00:00:18
00:21:22	Staff supervising metering system (2 shots)	00:00:12
00:21:33	Agiba Petroleum tank	00:00:06
00:21:39	Mediterranean Sea: tanker waiting for permission to access Terminal	00:00:06
00:21:45	WEPCO tanks (4 shots)	00:00:30
00:22:15	9. OIL SUPPLY: HASSI MESSAOUD - ALGERIA	00:01:17
00:22:15	Title Hassi Messaoud is the equivalent of Hassi R'mel for oil production, storage and dispatching. It is located 200 km east of Hassi R'mel. Some of the gas production is treated here but the Centre de Dispatching des Hydrocarbures Liquides is specializes in crude oil treatment.	00:00:05
00:22:20	General view of main entrance of Centre Industriel Sud (CIS)	00:00:06

00:22:26	Views of the facilities from the desert	00:00:05
00:22:31	Control room (3 shots)	00:00:27
00:22:57	Signs indicating main sites of the complex	00:00:04
00:23:02	Pipelines handling gas and crude oil to the metering system - Tanks (4 shots)	00:00:25
00:23:27	LPG unit	00:00:05
00:23:32	10. NORWEGIAN SEA	00:05:15
00:23:32	TITLE: OIL AND GAS SUPPLY - NORWEGIAN SEA Info: The Troll field lies in the northern part of the North Sea, around 65 kilometres west of Kollsnes, near Bergen. Containing about 40 per cent of total gas reserves on the Norwegian continental shelf (NCS), it represents the very cornerstone of Norway's offshore gas production. The enormous gas reservoirs lying 1,400 metres below sea level are expected to produce for at least another 70 years. Troll A is the tallest structure ever moved by humans over the surface of the Earth. Its concrete support section has been built for a lifespan of 70 years. The platform is the only one of its kind on the NCS that is powered electrically from land.	00:00:05
00:23:37	Aerial shot of a ship near Statoil's Troll gas platform	00:01:15
00:24:52	The concrete structure supporting Troll gas platform (2 shots)	00:00:09
00:25:01	A ship sailing through rough sea near the platform (3 shots)	00:00:11
00:25:12	TITLE: UNDERWATER OPERATIONS - NORWEGIAN SEA Info: In the future, most of the extraction operations will be done underwater, with no surface installations.	00:00:05
00:25:17	Launch of a ROV (remotely operated vehicle) for operations	00:00:24
00:25:41	Underwater views: ROV manipulating hooks and pipes at the bottom of the sea	00:00:39
00:26:20	3D Animation showing the installation of subsea templates	00:00:19
00:26:39	TITLE: GAS TERMINAL SNOHVIT - NORWEGIAN SEA Info: Snøhvit is the first offshore development in the Barents Sea. Without surface installations, this project involves bringing natural gas to land for liquefaction and export from the first plant of its kind in Europe and the world's northernmost	00:00:05

	liquefied natural gas facility.	
00:26:44	Aerial shots of the Statoil Snohvit gas terminal on the Barents Sea, northern shore of Norway (2 shots)	00:00:26
00:27:10	The Snohvit gas terminal at winter - rough sea	00:00:18
00:27:28	A LNG carrier berthing at Snohvit gas terminal	00:00:06
00:27:33	TITLE: OIL REFINERY MONGSTAD - NORWEGIAN SEAInfo: The facilities at the Mongstad complex in western Norway have been operational since the mid-1970s, and comprise a refinery, the Vestprosess NGL fractionation plant and a crude oil terminal. Located north of Bergen, the refinery is the largest in Norway and has an annual capacity of 10 million tonnes of crude oil.	00:00:05
00:27:38	Oil terminal with tankers berthing (2 shots)	00:00:21
00:27:59	The refinery: ships in the background	00:00:06
00:28:05	View of the refinery	00:00:10
00:28:15	Aerial view of the oil terminal	00:00:07
00:28:22	The refinery at dawn	00:00:25
00:28:47	11. GAS TRANSHIPMENT: FOS - FRANCE	00:07:58
00:28:47	Title Due to the growing demand and consequent increase in distance between natural-gas reserves and areas of consumption, EU had to diversify sources of supply and target more remote reserves beyond the reach of gas pipelines. This has led to an increase in LNG business in Europe and around the world. Liquefied natural gas (LNG) is natural gas that has been cooled to below -160°C to condense it into a liquid form for ease of transport. LNG takes up about 1/600th the volume of natural gas and mainly comprises methane (nearly 90%), ethane (5-10%), propane, butane and nitrogen (each less than 1%). Liquefying natural gas involves a series of refrigerated cycles. On average, a liquefaction plant consumes 12% of the incoming natural gas. Once natural gas has been liquefied it can easily be shipped by tanker to receiving LNG Terminals. LNG shipping chains liquefaction plant, LNG tanker, LNG terminal are the most economical form of transport over longer distances. In Europe, only 7 Member States have LNG terminals capable of receiving vessels and regasifying LNG: Spain, France, Belgium, Italy, Portugal, Greece, and the United Kingdom. Each of these countries has plans to create or expand one or more tanker terminals. as do the	00:00:05

	expand one or more tanker terminals, as do the Netherlands and Poland.	
00:28:52	Refinery of Fos seen from the sea	00:00:05
00:28:57	Small boat in the foreground, tankers in the background	00:00:06
00:29:02	Tankers at anchor in the «rade of Fos» (2 shots)	00:00:12
00:29:14	LNG tanker "Global Energy" sailing to Fos (4 shots)Info: Built in 2006, LNG tanker "Global Energy" is 219m long. Her 4 LNG tanks have a total capacity of 74 130 m3. 29 crewmen work onboard all year long. Her regular circuit goes between Skikda, Algeria, and Fos-sur-Mer, France. The ship is propelled by the consumption of the gas evaporated from the tanks at 99 %. «Global Energy» was the first LNG tanker in the world to be equipped with diesel-electric propulsion.	00:00:31
00:29:45	Crew member on board Global Energy	00:00:05
00:29:50	LNG tanker "Global Energy" upper deck with LNG pipes (2 shots)	00:00:09
00:30:00	Frozen pipe on the upper deckInfo: pipes ice over when they carry LNG at its liquefied temperature of -160°C	00:00:06
00:30:06	LNG tanker "Global Energy" upper deck with LNG pipes	00:00:04
00:30:10	Crew member on the deck (3 shots)	00:00:20
00:30:30	Sign saying «Danger, gas risk»	00:00:08
00:30:38	Crew man on the bridge, looking around	00:00:07
00:30:44	Inside the bridge: crewman looking over cargo's information on screen (5 shots)	00:00:30
00:31:14	Commandant looking through binoculars to the port of Fos	00:00:08
00:31:22	The LNG terminal of Fos, with windmills	00:00:05
00:31:28	The LNG terminal of Fos, sailboat in the foreground	00:00:05
00:31:33	The LNG terminal of Fos, tankers and barges passing by (2 shots)	00:00:18
00:31:51	Tankers waiting for unloading. Shore in the foreground	00:00:09
00:32:01	LNG terminal in the distance - children and surfers in the foreground (2 shots)	00:00:13

00:32:13	Tankers in the distance, windsurfers in the foreground	00:00:05
00:32:18	LNG carrier «Global ENERGY» arriving, directed by 2 tugs (3 shots)	00:00:19
00:32:37	Tug and ship preparing U-Turn before berthing (3 shots)	00:00:18
00:32:55	LNG carrier berthing (2 shots)	00:00:11
00:33:06	Mooring process (2 shots)	00:00:09
00:33:15	«Global Energy» at berth - Terminal pipelines Info: LNG terminals are facilities that receive shipments of liquefied natural gas transported by ship, which is then regasified and reinjected into the transport network. GDF SUEZ is the world leader in LNG and the number two LNG terminal operator/owner in Europe. The Fos-Cavaou LNG terminal, that came online in 2010, has an LNG capacity of 8,25 Gm3/yr.	00:00:05
00:33:20	LNG terminal control room (10 shots)	00:01:02
00:34:22	The LNG unloading articulated pipes of the Terminal being fixed to the tanker valves (6 shots)	00:00:37
00:34:59	Alarm sound (first degree alarm: pipes moved) on the LNG boat	00:00:06
00:35:05	Articulated pipes arms, seen from the ship; Unloading gas	00:00:07
00:35:12	LNG Unloading Control Room on the «Global Energy»: officers checking computers, displays (3 shots)	00:00:15
00:35:28	Articulated pipes arms pumping the gaz from the ship to the terminal (2 shots)	00:00:12
00:35:39	Pipelines carrying the LNG from the ship to the Terminal tanks (3 shots)	00:00:15
00:35:55	«Global Energy» at berth, seen from quay	00:00:07
00:36:01	Pan along the pipeline: from « Global Energy » to tanks	00:00:04
00:36:05	Tankers going to sea, oil tanks in the foreground	00:00:08
00:36:13	High pressure pumps (they pump the LNG at -162°C) to put it under pressure at 85 bars (2 shots)	00:00:13
00:36:26	Working pumps show frozen caps	00:00:06
00:36:32	Evaporated LNG Recuperator	00:00:04

00:36:36	The sea water regasification heat exchangers (2 shots)	00:00:09
00:36:45	12. OIL TRANSHIPMENT BY SEA: ANTWERP - BELGIUM	00:10:07
00:36:45	TitleThe Port of Antwerp is the second largest port in Europe in terms of freight volumes, and the lead break bulk port in Europe. There is 160km of quayside available for loading and unloading activities and 1,474 tanks with a capacity to store 3.6 million cubic metres of liquid bulk cargo. Located on the right bank of the river Scheldt, some 80 km inland of the North Sea, the port is a major gateway to Europe. It is owned and operated by the Antwerp Port Authority. The port connects other major European ports as it is strategically situated in the centre of the north-west Europe. The port is accessible to cape-size vessels. The Port of Antwerp is well accessible through a multimodal transportation network consisting of road, barge, rail, pipelines and short sea/feeder. In 2011, the volume of crude oil (2.5 million tonnes) and chemicals (5.8 million tonnes) expanded by 17.1% and 16.8% respectively.	00:00:05
00:36:50	The tug «Antwerpen» pulling a cargo ship into the locks (3 shots)	00:00:21
00:37:11	Tug manoeuvring - «Sea Tank Terminal» in the background (6 shots)	00:00:36
00:37:48	Tug leaving - tanks in the background	00:00:06
00:37:53	Tug leading tanker across the Port - Another tanker sailing in the background (3 shots)	00:00:22
00:38:16	Refinery flare tower	00:00:06
00:38:21	Tanker leaving for sea - Refinery in the background	00:00:11
00:38:32	Tanker manoeuvring	00:00:09
00:38:41	Oil tanker berthing at Antwerp oil terminal (2 shots)	00:01:05
00:39:46	Aerial views of oil tanks (2 shots)Info: Oil Tanking Terminal: The total storage capacity is 1.147.121 m ³ . Products stored include gas condensate, naphtha, gasoline, jet and gasoil. 6 new tanks are to be built by 2013: 6 tanks - total 185.000 m ³ capacities.	00:00:47
00:40:33	«OilTanking » logo on a tank	00:00:19
00:40:51	Oil tanks, pipelines in the foreground	00:00:06
00:40:58	Tanker "Stolt Island" at quay	00:00:06

00:41:03	Crew member of the "Stolt Island"	00:00:06
00:41:09	Tanker "Stolt Island" bridge: First Mate working (4 shots)	00:00:34
00:41:43	Navigation chart of Indian Ocean with "High Risk Area" written in red	00:00:06
00:41:49	Navigation chart of Europe, with maritime routes	00:00:05
00:41:54	Flag waving in the air	00:00:06
00:42:01	Tanker crew member giving instructions for manoeuvres	00:00:05
00:42:05	Incoming ship's crew member throwing moorings	00:00:12
00:42:17	Incoming small tanker berthing along "Stolt Island" oil tanker	00:00:06
00:42:23	Crew mooring (2 shots)	00:00:17
00:42:40	Pan from incoming small tanker to oil terminal	00:00:10
00:42:50	"Nord Land" Oil tanks in the terminal	00:00:06
00:42:55	"Stolt Island" oil tanker at quay, ready to unload	00:00:05
00:43:00	Crew member preparing pipes on the tanker's bridge	00:00:04
00:43:04	Staff from oil terminal preparing pipes on the quay, checking pressure (6 shots)	00:00:40
00:43:44	General view of Antwerp oil terminal in heavy rain	00:00:06
00:43:50	Inside the Berendrecht Lock (500m in length and 68m in width the largest lock in the world): Tug directing oil tanker (Sharon Sea) in the lock (2 shots)	00:00:11
00:44:01	Tanker "Sharon Sea" leaving the lock to enter Port	00:00:10
00:44:11	Large shot of tanker "Sharon Sea" lead by tug entering the Port	00:00:05
00:44:16	Tanker "Lotus Express" crew on the deck, in heavy rain (2 shots)	00:00:28
00:44:44	Tug leading tanker "Lotus Express" out of the lock (2 shots)	00:00:13
00:44:57	Close up of the oil gates, on the tanker's deck	00:00:05
00:45:02	Large shot of tanker "Lotus Express" entering the port, lead by tug and crossing cargo vessel (6 shots)	00:00:33
00:45:35	Tanker "Lotus Express" at quay at Total wharf (8 shots)	00:00:47

00:46:22	Tanker "Stella Marris" leaving the lock, heading out of Port (5 shots)	00:00:30
00:46:52	13. INLAND OIL REFINERY: BUDAPEST - HUNGARY	00:02:44
00:46:52	Title	00:00:05
00:46:57	MOL Danube refinery, entrance with signs and flags (3 shots) Info: MOL Group's Danube Refinery is located in Százhalombatta near Budapest. With 8.1 million tonnes/year nameplate crude oil distillation capacity this is the sole oil distillation plant in Hungary. It processes 6.5 million tonnes of crude oil in 2011, supplied mainly through the Russian Friendship crude oil pipeline and partly from domestic production.	00:00:16
00:47:14	Pipelines - tanks in the background (4 shots)	00:00:21
00:47:34	Pipeline arriving from Russia, with control instruments (2 shots)	00:00:09
00:47:44	Pipelines	00:00:05
00:47:49	Desulphurization unit	00:00:06
00:47:54	Pipelines	00:00:06
00:48:00	Pipelines inside the refinery	00:00:10
00:48:10	Heating system pipeline: valves (3 shots)	00:00:21
00:48:32	Crude Oil distillator (4 shots)	00:00:22
00:48:54	Petro-chemical production (2 shots)	00:00:13
00:49:07	Exterior view of the Logistic departure center: staff coming in	00:00:11
00:49:18	Control room of the Logistic departure centre	00:00:13
00:49:31	Displays with technical data	00:00:05
00:49:37	14. PORT OIL REFINERY: ANTWERP - BELGIUM	00:03:01
00:49:37	Title Info: The Total Refinery in Antwerp is the largest refinery of the Total Group. It handles 350.000 barrels per day and has a crude distillation capacity of 18 million tons per year. About 1080 employees (own personnel) work in, to which must be added some 340 contractors on average per day. First opened in 1951, it is continuously undergoing rebuilding and modernisation. The Total refinery covers a surface of 220 ha, with 162 storage tanks. The 2010 exports are: 47% by pipeline, 42% by barge, 2% by truck and 9% by sea-going vessel (large boats).	00:00:05

00:49:42	Total refinery seen from the opposite bank of the river Scheldt (Escaut)	00:00:05
00:49:47	Flare towerInfo: Depressurizing plant, gases are disposed of using flare stacks, where a pilot flame burns continuously to ensure ignition of the gases takes place.	00:00:04
00:49:51	2 barges navigating the Scheldt with cranes and Total Refinery	00:00:06
00:49:57	Barge with Total Refinery in the background	00:00:05
00:50:02	TOTAL Refinery (2 shots)	00:00:10
00:50:12	TOTAL Refinery with seagulls and steam	00:00:21
00:50:33	The main crude oil column in Total Refinery - seagulls flying	00:00:10
00:50:43	Total Refinery	00:00:16
00:50:58	The refinery and pipe-lineInfo: Within a refinery, there are numerous areas where automobile vehicles are forbidden, to avoid explosions; bicycles allow operatives to move around the refinery where speed is limited to 25 km/hour.	00:00:05
00:51:03	High pressure steam system (2 shots)Info: The refinery needs steam to drive plant and equipment and provide heating for the distillation process. It is provided by high pressure boilers.	00:00:11
00:51:14	Refinery crude distillation unit (2 shots)	00:00:15
00:51:28	Pipe-lines going to and coming out of the distillation unit	00:00:05
00:51:33	The outlet pipes of the crude distillation unit	00:00:05
00:51:38	Crude distillation unit and network of pipelines	00:00:11
00:51:49	Hydrodesulphurization unit (4 shots)Info: Hydrodesulphurization is a chemical process used to remove sulphur from refined petroleum products such as gasoline, jet fuel, kerosene, and diesel; so it consists of a reduction of the sulphur dioxide emissions that result from using those fuels in automotive vehicles, aircraft locomotives, ships, power plants and furnaces.	00:00:22

00:52:11	Refinery seen from tanker terminalInfo: 100 millions tons of crude oil is delivered every year to Rotterdam Port in the Netherlands. 30% of these are transferred by an underground pipeline from the Antwerp Port and Total Refinery, the River Scheldt being too shallow to accommodate big tanker vessels.	00:00:05
00:52:16	The crude oil Antwerp to Rotterdam pipeline emerging in the Total refinery (3 shots)	00:00:15
00:52:31	Copyright	00:00:07

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