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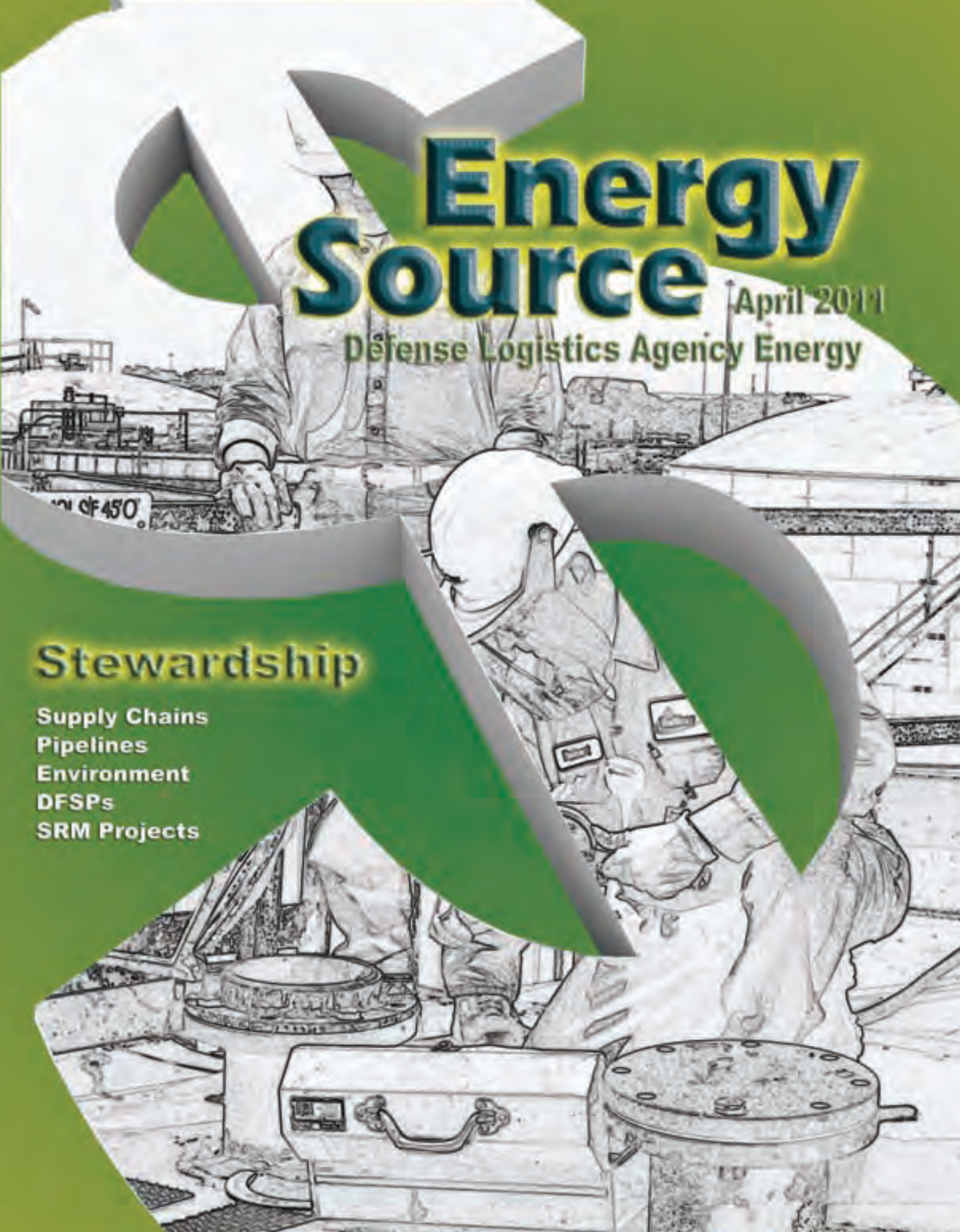

Stewardship

Supply Chains
Pipelines
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SRM Projects

DLA Energy collaborates on European pipeline stewardship

A workman changes out worn out filters on the high-pressure microfilter at the Pfungstadt depot along the Central European Pipeline System. The filter cleans sediment out of the petroleum products transported through CEPS. Photo courtesy of NATO.

By Terry Shawn
DLA Energy Public Affairs

A unique stewardship alliance among six NATO member nations helps ensure fuel flows economically and efficiently in Central Europe.

The relationships forged between the U.S. Department of Defense and other participating NATO countries result in the efficient operation of the Central Europe Pipeline System despite the fact that the system spans five nations, said Army Col. Stephen Walker, commander of the Defense Logistics Agency Energy Europe and Africa region.

A recent example of the cooperation between countries came in October when the Central Europe Pipeline Management Agency requested DLA Energy Europe and Africa temporarily loan part of the U.S. military's storage allocation in the system to CEPMA. The 30,000 cubic meters, or space for 188,790 barrels of fuel, was desired from Nov. 1, 2010 to April 30, 2011, said Hauke Dins, senior technical advisor with DLA Energy Europe & Africa's inventory management branch.

The space was useful to better manage the operational constraints and a lack of capacity caused by the strikes in France and by the recent evacuation of part of the French national fuel reserve, he explained.

The DLA Energy Europe & Africa supply manager for the CEPS analyzed the current inventory situation, the lift requirements from current contracts with Total France and Motor Oil Hellas, and the U.S. inventory evolution through July 2011. Based upon this analysis, DLA Energy headquarters and Europe & Africa approved CEPMA's request. The loan will save €229,240 ($315,000) in storage cost savings for the period the space is loaned out, said Dins.

"These factors have enabled us to accommodate this special request. It has helped the CEPS headquarters to overcome the operational constraints and the lack of capacity," said DLA Energy's senior technical advisor.

"For us, this loan will result in storage cost savings while we are still able to meet our contractual requirements to the resupplying companies. Thus, it is a win-win situation for all parties," said Dins.

Operations

The CEPS is an integrated pipeline system originally built between the late 1950s and mid-1990s to serve the wartime military fuel requirements of eight NATO nations: Belgium, Canada, France, Germany, Luxembourg, the Netherlands, the United Kingdom and the United States. Canada and the U.K. no longer participate.

The CEPS currently serves the military needs of six nations. The physical facilities that make up the CEPS, including pipelines, storage depots, pump stations, etc., are located across five host nations; Belgium, France, Germany, Luxembourg and the Netherlands.

According to John Cummings, DLA Energy liaison to the U.S. Mission to NATO, the system is made up of 5,182 km, or 3,220 miles, of pipelines ranging in size from 12-inch cross-country pipelines to 4-inch airfield spur lines. Along the pipeline there are 81 high pressure pump stations, and 38 storage depots to store more than 7.8 million barrels of Jet A1. There are 13 entry points to the CEPS—six sea points accessible by tanker ships and seven refinery points.

Military and commercial petroleum products travel through CEPS. The U.S. military converts the commercial Jet A1 to military specification F34, or JP8, by injecting the required military additives at the point of delivery. Jet A1 represents roughly 80 percent of the petroleum products transported on the CEPS.

Secondary commercial petroleum products transported on the CEPS include diesel and heating oil, which enters the pipeline in Northern France and is pumped to Belgium and Germany; Naphtha, a gasoline type mixture of hydrocarbons distilled from oil and converted in a chemical plant, with a steam cracker, into ethylene, propylene and other basic products to manufacture plastics. Naphtha enters the CEPS mainly in southern France and is pumped to eastern France and southern Germany.

Twenty-four military airbases are directly connected to CEPS, including the U.S. airbases at Ramstein and Spangdahlem, Germany. Today, six non-military airports are also directly connected

At a train loading station near the French-German border at Strasbourg, France, a railway tanker car is loaded with petroleum products. Photo courtesy of NATO.

to CEPS. These are Zaventem Airport in Brussels and Bierset Airport in Liege, Belgium; Koln-Bonn Airport and Frankfurt Airport, Germany; Schiphol Airport in Amsterdam, the Netherlands; and Findel Airport in Luxembourg. Two others could be connected to the CEPS in the near future. There are also 15 active truck-loading stations and two active railcar-loading stations serviced by the pipeline system.

Fuel exchange agreements are another example of how the CEPMA partnership results in good stewardship, said Dins. An agreement between DLA Energy Europe & Africa and the German Army allows both sides to receive fuel from the fuel facilities of the other partner. Twice a year, accounts are reconciled, and the owing party returns the owed fuel in-kind to the other. The last two reconciliations were accomplished via the CEPS. The German Army returned the fuel owed to DLA Energy by ordering these amounts from their suppliers and paying for the transportation from the entry point of that supplier to the U.S. Spangdahlem Air Base.

Funding and management

Funding for the operations and maintenance of the CEPS comes from three sources: revenue from commercial transportation and storage contracts; revenue from the transportation and storage of military fuel for the six CEPS member nations; and a national contribution paid by each of the member nations. The amount of the national contribution varies yearly depending on the difference between the annual budgeted cost to operate and maintain the CEPS and the annual projections for commercial and military transportation and storage revenues. Some major maintenance work is also eligible for NATO Security and Investment Program funding.

Top-level oversight and management is provided by the Central Europe Pipeline Management Organization and its board of directors. The CEPMO BOD is made up of a chairman selected from the six member nations, additional representatives of the member nations, representatives from CEPMA, representatives from the NATO military command, and representatives from the NATO international staff.

The CEPMO BOD meets thrice annually to discuss organizational, financial and overall operational issues. Working groups meet several times each year to coordinate traffic movements; business development; infrastructure projects such as new construction, major repairs, pipeline pigging inspection programs; and the development of the following year's operation and management budget.

"This year DLA Energy will host the spring BOD meeting in San Antonio as a part of the organization's annual representation program. Annually, one nation hosts the spring meeting in their country in order to

Central European Pipeline System Dispatcher Harald Schoefer, center, explains an automated board used to track pipeline operations to Joachim Elfner, head of the Southern German CEPS, left, and a German soldier. Photo courtesy of NATO.

improve relationships and showcase national interest areas like energy, culture and history," Walker said.

CEPMA, based in Versailles, France, oversees the overall coordination of transportation traffic management, CEPS-wide product quality management and storage activities. CEPMA also coordinates CEPS pipeline maintenance and infrastructure improvement activities, system financial management and business development activities.

"Over the years, the collaboration with DLA to provide and improve the logistic services of CEPS—delivering jet fuel to its major military client, the U.S. military forces in Ramstein and Spangdahlem, has been a top priority for CEPMA and of paramount importance," said Robert Goyens, a NATO logistician and CEPMA head of traffic.

Day-to-day operational maintenance of the CEPS is the responsibility of four national pipeline organizations in Belgium, France, Germany and the Netherlands; the Belgian pipeline organization also operates the pipeline for Luxembourg. The organizations also manage the execution of the annual pipeline

diagnostic "pigging" program, overseen by the CEPMA technical department. Any needed repairs and major upgrades to the CEPS, such as increases in pipeline segment diameters, new lines, pump or pump engine replacement; etc., are first discussed and prioritized in the CEPMO infrastructure working group and then presented to the CEPMO BOD for funding authorization.

The actual execution of major repairs or new construction is carried out by host-nation construction organizations that work under the oversight of the four national pipeline organizations.

Head of the Southern German Central European Pipeline System Joachim Elfner, center, listens with a representative from the German Army, as dispatcher Harald Schoefer explains the operation of CEPS as depicted on the multiple computer monitors in the central control room of the CEPS. Photo courtesy of NATO.

Successful partnership

"Although an outsider may look at it as a kind of tower of Babylon, where everyone has the possibility to express himself in his own language—as English, French, German and Dutch are constantly commingled—thanks to the energy, effort and the enthusiasm of its members, solutions can be found for most technical, customs, personnel, accounting and other problems," the CEPMA head of traffic said.

Thanks to the DLA representative's expert participation in quarterly traffic meetings, problems and their solutions are usually anticipated rather than surprises, Goyens said. "Frank, transparent and open discussions are the rule here," said Goyens, allowing participants to learn from experience and prevent future problems.