



# Would Urenco's Sale Pose a Proliferation Risk?

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ARTICLE | OCTOBER 21, 2013

## Summary

Company is unlikely to increase the risk of proliferation.

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Urenco, one of the world's leading uranium enrichment companies, was established by the Treaty of Almelo over four decades ago. The treaty's three contracting parties—Germany, the Netherlands, and the United Kingdom—have been responsible for protecting the firm's highly sensitive centrifuge enrichment technology.

That task is an important one. Urenco has pioneered in the development of gas centrifuges for uranium enrichment. Those centrifuges can be used to make fuel for reactors that generate electricity. But they can also be used to produce uranium for nuclear weapons. In the 1970s and 1980s, the technology was stolen by agents of Pakistan and Iraq and put to use in clandestine nuclear-weapons-development programs in these countries and elsewhere. Since then, the Almelo governments have taken steps to better protect the company's classified know-how.

Urenco's shareholders in the Almelo countries are now preparing to sell their interests to outsiders, which could in theory increase the risk of proliferation. But a sale is not likely pose a proliferation threat because the Urenco governments—not the shareholders—are ultimately responsible for the security of the company's know-how. However, if shares change hands, the governments should recommit themselves to fulfill their duties under the Almelo Treaty.

## Current Status

The Almelo Treaty's three governments founded Urenco in 1971 to centralize and commercialize Europe's development of gas centrifuges for uranium enrichment. Since then, the firm has steadily grown in capacity, market share, and profitability.

Currently, Urenco has four shareholders—the UK government, the Dutch government, and two private

German utilities, RWE and E.ON. The company operates three enrichment facilities in Europe, one in each of the shareholder countries: Capenhurst in the United Kingdom, Almelo in the Netherlands, and Gronau in Germany. And in 2010, Urenco began operating a new enrichment plant in the state of New Mexico in the United States.

By the end of 2012, Urenco's total enrichment capacity was 16.9 million separative work units per year. Using gas centrifuge technology that Urenco has continually developed since its inception, the company accounts for nearly 30 percent of the world market for the supply of uranium enrichment services. According to some estimates, Urenco might have a market value of around \$15 billion.

Urenco and the French nuclear vendor Areva are 50/50 joint owners of the Enrichment Technology Company (ETC). The ETC owns and controls all the classified and proprietary know-how related to gas centrifuge enrichment plant design, development, and manufacture that Urenco uses. Until 2006, Urenco was the sole owner of this technology. In 2005, the three Urenco governments and France signed the Treaty of Cardiff, which provides for both Urenco's and Areva's 50 percent ownership in the ETC and their use of ETC know-how at their uranium enrichment plants. The uranium enrichment know-how that Urenco developed for over three decades was transferred to the ETC, and both Urenco and Areva were licensed to use the technology to sell enrichment services to the world market.

Two additional government-to-government treaties have been put in place to accommodate the expansion of ETC technology into the United States. The 1992 Treaty of Washington between the three Urenco governments and the United States permitted the construction and operation of the enrichment plant in New Mexico. And the 2011 Treaty of Paris opened the way for the construction, which is still pending, of an enrichment facility in the United States that would be owned by Areva and outfitted with ETC-supplied centrifuges.

## **Sale of Urenco Shares**

Since 1971, shares in Urenco have changed hands at times but have remained in the possession of government-owned or commercial entities incorporated in the three Treaty of Almelo countries. From the birth of the company until today, ownership of Urenco has been divided up into three one-third packets, each one held by shareholders in each of the three Almelo countries. During the last two decades, shareholders in Germany and the UK have considered selling their shares, largely because of commercial and budgetary considerations.

The UK wants to sell its shares in line with government policy to sell public assets to reduce the national debt. The British government owns its third via a holding company, Enrichment Investments Limited, which is managed by the UK Department for Business, Innovation, and Skills. In April 2013, the department announced that it is proceeding with plans to sell some or all of its Urenco shares, having obtained agreement from the governments of Germany and the Netherlands. The sales can only proceed provided "the government is satisfied that the UK's security and non-proliferation interests can be protected and that value for money is achieved for the UK taxpayer."

For largely strategic business reasons, for over a decade the German utilities RWE and E.ON, which equally share a third of Urenco through the holding company Uranit UK Limited, have aimed to sell their shares. Their resolve was cemented by the German government's 2011 decision to phase out nuclear power generation in the country. In January 2013, the Federal Ministry of Economics and Technology—the lead German government agency overseeing Urenco affairs—confirmed in a statement to lawmakers that the two German utilities and the UK government were interested in selling their shares. Germany, it said, would agree to changes in the shareholding structure only so long as nuclear nonproliferation, the protection of enrichment technology, and the economic viability of Urenco were ensured.

Only more recently did the Dutch government spell out its intentions concerning its third of the Urenco shares. In 2012, the Netherlands said that, on security and nonproliferation grounds, it favored retaining

the existing Urenco shareholding structure, including one-third ownership by the Dutch company Ultra-Centrifuge Nederland Limited. But in May 2013, the government announced that it had agreed to sell this share, provided nuclear nonproliferation, nuclear safety, and security of supply are ensured. According to Dutch officials, proceeds from the sale would be greater if all the shares were sold at the same time, affording the buyer a controlling interest in Urenco.

Any sale would take place within the framework of Urenco's corporate structure, which is based on the legal foundation provided by the Treaty of Almelo. The treaty contains provisions regarding nonproliferation, nuclear safeguards, information protection, withdrawal from and termination of the treaty, and a defined decisionmaking process. Significantly, the treaty established a supervisory Joint Committee comprised of representatives from the three governments that must make all its decisions—including on any sale of shares—by consensus.

The most likely prospect for a share sale is that, should the Joint Committee agree, some or all of the shares in the Urenco shareholding companies would be sold. The changes in ownership would affect the composition of the Urenco board of directors, which oversees business operations (under UK law because Urenco is incorporated in the UK). The board concerns itself with the conduct of Urenco's business, but the Joint Committee must approve its actions in areas for which the committee is responsible under the Almelo Treaty.

In theory, the shares could be purchased by parties located inside or outside of the Almelo countries. Regardless of whether a potential new shareholder would be from one of these countries, the procedures and approval process for transferring shares under the Almelo Treaty would be the same. Press reports have identified a number of potential candidates for buying the shares, including entities in Canada, France, Japan, Singapore, South Korea, and other countries.

## **Oversight Under New Shareholders**

All three Almelo Treaty governments have conditioned their approval of any new shareholder arrangements upon confidence that standards for nonproliferation and data security will be upheld. But the Netherlands, in May 2013, also attached conditions to the share sale that appear to reflect concerns that the transfer of shares to new owners outside the Almelo countries poses some residual risk.

In particular, The Hague wants to reserve for the Almelo governments certain rights that would override the prerogatives of shareholders. These would include oversight of Urenco's compliance with treaty obligations; new enrichment contracts and the disposal of radioactive waste; the hiring of Urenco directors (including the right to fire them should they expose the company to proliferation, nuclear safety, or supply security risks); and approval of shareholders and the extent of their shareholdings as well as the option of depriving shareholders of voting rights. These rights would also provide for a veto over any future purchase or sale of Urenco shares and authority to approve any changes in company structure.

Since May, officials representing other shareholders in the UK and Germany, as well as parties interested in buying the shares, have informed their Dutch counterparts that should The Hague insist on reserving these rights for the Almelo Treaty parties, a sale of the shares will be unpalatable to prospective new owners. Germany, the Netherlands, and the UK are now negotiating a mutually acceptable understanding concerning the proposed share sale aimed to protect the ETC's sensitive information while respecting Urenco shareholders' commercial freedom. An agreement may be reached in November.

## **Nonproliferation and Information Security**

Current mechanisms for making sure that the ETC technology Urenco uses to enrich uranium for electricity generation is not misappropriated are relatively robust. The locus of responsibility for that oversight is the Treaty of Cardiff. The parties to the treaty—France, Germany, the Netherlands, and the

UK, represented in a Quadripartite Committee—must make sure that present or future ETC shareholders do not obtain classified information beyond that necessary for the safe operation of enrichment plants. The treaty defines classified information as including “documents, drawings, electronic media, information or material containing classified information and such information incorporated in centrifuge plant equipment and components however communicated.” As was required by the European Commission for reasons of antitrust policy, shareholders in the ETC are not to provide ETC management any commercial data.

Data security oversight is the responsibility of an ETC security working group reporting to the Quadripartite Committee under the Cardiff Treaty. It routinely discusses information security issues with ETC management.

In principle, all centrifuge enrichment plants operating in Europe and the United States using ETC technology are so-called black boxes; that is, the technology inside the plants is not available to the enrichment firms—Urenco and Areva—that operate the plants. In practice, these projects have a few “gray” areas, where the ETC has shared a limited amount of compartmentalized classified information with nuclear regulators seeking assurance that the plants are safe and with individuals who are building centrifuges that will be installed in the plants.

In the United States, this has meant that a small number of people at the Nuclear Regulatory Commission and at Urenco's U.S. subsidiary have been provided some classified ETC centrifuge-design information. The sharing of this information is covered by formal agreements concerning common principles and procedures regarding security classification and the transfer of classified information for licensing and oversight purposes. In all cases, Urenco facilities' security-related practices are subject to oversight by the Joint Committee and the Quadripartite Committee.

## **Avoiding Future Security Threats**

Two security threats might emerge related to possible new Urenco ownership, namely in terms of shareholder access to ETC information and the risk associated with construction of an enrichment facility in a new country.

New private sector shareholders from outside the Almelo countries could pressure the Joint Committee to weaken oversight for certain operations. Nevertheless, concerning information protection, at least since the mid-1990s, all Almelo parties have shared a common data protection system supported by national counterintelligence and law enforcement agencies. Under that arrangement, private sector shareholders in Germany have not challenged the Almelo governments' authority in protecting the ETC's information, and this should not change with new shareholders.

Indeed, because the Cardiff Treaty assigns the Quadripartite Committee—in which shareholders do not participate—the responsibility for protecting the ETC's uranium enrichment technology, it is unlikely that new shareholders from outside the Almelo area will influence decisionmaking about information access. Additionally, the historical record since 1971 suggests that it would be extremely difficult for the Cardiff and Almelo Treaties to be amended to weaken the mandate or authority of the Joint Committee and the Quadripartite Committee—especially for the purpose of favoring the interest of an external shareholder.

It is also unlikely that a new shareholder would influence decisionmaking in its favor to ensure the construction of a new enrichment plant on its territory. The reason is that all three Almelo governments would have to agree to such a decision.

There have been occasions when one or more of the Almelo Treaty parties—for security, diplomatic, or other noncommercial reasons—have expressed concern about Urenco entering into business relationships with new prospective foreign partners. It is not a coincidence that the Netherlands has expressed concern that a sale of Urenco shares to non-European parties might be risky. The Netherlands is deeply aware that as a result of the theft of its centrifuge know-how by A. Q. Khan in the

1970s, this technology was used for secret nuclear programs in Pakistan, Libya, and Iran.

When the Cardiff Treaty faced ratification, Dutch lawmakers were keen to make sure that the new arrangements establishing the ETC did not create nonproliferation risks. While ratification of the Cardiff Treaty in Germany and the UK happened quickly, in the Netherlands it required two years of parliamentary discussion and debate.

In light of the importance the Dutch government affords nonproliferation issues concerning uranium enrichment, should any shareholder attempt to influence the decisionmaking of the Joint Committee or the Quadripartite Committee in its favor concerning a matter of security or nonproliferation significance, one European enrichment expert said, “the Netherlands would say no.”

## **A Nonproliferation Risk?**

If ownership of Urenco were to change hands, it is extremely unlikely that the new shareholders would have any access to information related to enrichment technology. As for the construction of a new enrichment plant in other countries, all Urenco governments would need to agree to such a move.

The fact that Urenco's owners are located in the three Almelo Treaty countries has underscored the Joint Committee's responsibility for good governance. If, in the future, the company is owned by parties outside these countries, the three Almelo governments should remain vigilant and should further ensure the highest level of nonproliferation protections.

The Joint Committee might be helped by a stronger, more high-profile commitment to Urenco. Such a commitment could be expressed in a new tripartite agreement that would spell out in more detail the Almelo governments' responsibilities and treaty rights to protect Europe's uranium enrichment assets, while leaving the company's routine business operations in the hands of its shareholders.

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Source: <http://carnegieendowment.org/2013/10/21/would-urencos-sale-pose-proliferation-risk/gqto>