

For Immediate Release



## **AUB study: Diesel generators stealing citizens' health and money**

Beirut, Lebanon- 17/12/2012 - Residents in a typical Beirut neighborhood are being exposed to at least 2.5 times more cancer-causing pollutants when diesel power generators are switched on, according to a new AUB study released on December 17, 2012.

Funded by the Issam Fares Institute for Public Policy and International Affairs as part of its Climate Change and Environment in the Arab World Program, the study was led by researcher Alan Shihadeh, a professor of mechanical engineering, in collaboration with chemistry professor Najat Saliba, both from the American University of Beirut.

The study was conducted from January 2010 to January 2012 and involved monitoring the levels of polycyclic aromatic hydrocarbons (PAHs) at 20 different residential sites in Hamra, while generators were on and while they were off. Each site was monitored for 15 days. About 184 buildings in Hamra were surveyed and it was found that 109 among them had diesel generators. In general, Beirut is subject to power rationing, experiencing outages for three hours daily between 6am and 6pm daily.

PAHs are among the most widespread organic pollutants, resulting from incomplete combustion of carbon-containing fuels such as gasoline, diesel, coal, and tobacco. PAHs are considered to be highly carcinogenic and cause genetic mutations and affect physiological development.

“The results of the study showed that almost 40 percent of Hamra residents’ exposure to polycyclic aromatic hydrocarbons comes from the operation of diesel power generators in the neighborhood,” said Shihadeh, who also directs the Aerosol Research Laboratory at AUB and has collaborated on research on the effects of tobacco and nargileh smoking on indoor pollution. Moreover, during the time power generators are on, residents are exposed to 60 percent more cancer-causing PAHs than when the generators are off. Meanwhile, more than 60 percent of exposure to PAHs comes from other sources of air pollution such as traffic, burning tires, and smoke from ships or industrial stacks.

Shihadeh added that exposure to pollutant levels in indoor areas where smoking is allowed is still higher than exposure to pollutants due to diesel generators.

In fact, Shihadeh noted that exposure to PAHs is still highest in second-hand smoke, closely followed by automotive traffic and then by diesel generators.

Moreover, Shihadeh warned that PAH levels are significantly higher in areas where generators operate for 12 hours per day.

As a result, the study recommends that the government find an immediate solution for eliminating power rationing and thereby eradicating the use of private power generators, which will bring much-needed revenues to citizens and the government alike, thus enhancing

spending. In fact, the study found that the monthly cost to Hamra residents for operating diesel generators stands at \$120,000 to cover for the three hours of daily power outages versus \$45,000 if they were to receive power for these three hours from the state-owned Electricite du Liban. In other words, Hamra residents are losing \$75,000 monthly. The research team also warned that fuel sources in Lebanon are of poor quality and the operation of private power generators is not regulated; only industrial-sized generators are regulated.

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**Note to Editors**

### **About AUB**

Founded in 1866, the American University of Beirut bases its educational philosophy, standards, and practices on the American liberal arts model of higher education. A teaching-centered research university, AUB has more than 600 full-time faculty members and a student body of about 8,000 students. AUB currently offers more than 100 programs leading to the bachelor's, master's, MD, and PhD degrees. It provides medical education and training to students from throughout the region at its Medical Center that includes a full service 420-bed hospital.

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