

Creating safe and inclusive environments is a top priority for UK government, who have signed up to several international commitments in this area, including Sustainable Development Goal 11 to ‘make cities and human settlements inclusive, safe, resilient and sustainable’, with a target that directly contributes to addressing women and girls’ safety in communities and public spaces.

Violence and the threat of violence holds back economic growth in urban areas, limiting women’s mobility, access to economic opportunities, and the ability to move into higher paid or more secure jobs. In Mexico City, World Bank funded researchⁱ found women living on the periphery of the city are making difficult decisions over the trade-off between economic opportunity and personal security, as women’s earnings are three times higher in the city centre, but over half experience sexual harassment on public transport. The cost of violence against women ranges from 1.4% to 3.7% of Gross Domestic Product (GDP), according to recent costing studies within developing country contexts.

1 in 3 women experience some form of physical and sexual violence in their lifetime.

Violence limits the success of urban and infrastructure programs aimed at improving access to resources and services. Safe, inclusive and well-planned public spaces, infrastructure, urban services, and transport can reduce violence and harassment that women and girls face and increase access to economic opportunities.

What are the risks?

Women and girls face various risks of violence and sexual harassment around access to energy:

- **Poorly lit streets** can increase women’s fear of being a victim of crime. In Delhi, India, a surveyⁱⁱ of over 2,000 women found that 63% of respondents felt fearful of going out after dark. More than 21% do not venture out alone at all. In Addis Ababa, Ethiopia, research by ActionAidⁱⁱⁱ found that women vendors fear negotiating deserted roads, especially early in the morning or late at night when the roads are dark and poorly lit. These women workers lack access to a proper marketplace and sell their goods on the street so are at constant risk of robbery.
- **Electricity/power failures** can impede women and girls’ ability to access essential services safely. For example, a women’s safety audit^{iv} in Bawana, India found that during electricity cuts, women are at increased risk of being groped at community toilet complexes. As a result, many women try to control their urges to use the toilets until the electricity comes back on.
- **Lack of working public telephones or access to a private mobile phone** can make it difficult for women to call telephone hotlines to call for help or report violence.^v
- **Violence and harassment against women working in the energy sector**, for example, with reports of women facing sexual harassment in Pakistan’s oil and gas industry and Bangladesh’s rural electric utilities.^{vi}
- **During major energy infrastructure projects**. An influx of migrant workers can create markets for sexual exploitation, abuse and human trafficking, as occurred for women living around the Baku-Tbilisi-Ceyhan oil pipeline project in Azerbaijan. Women and children are also at greater risk of domestic violence if men’s increased income is spent on alcohol, drugs, or prostitution.^{vii}

Risks



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- Electricity/power failures
- Lack of working public telephones
- Violence against women working in the energy sector
- During major energy infrastructure projects

What are the key opportunities and promising practice?

'Do Minimum'	'Empowerment'	'Transformation'
Programmes that address basic needs and vulnerabilities of women and marginalised groups	Programmes that build assets, capabilities, and opportunities for women and marginalised groups	Programmes that address unequal power relationships and seek legal, institutional and societal level change
<ul style="list-style-type: none"> • Install and maintain street lighting 	<ul style="list-style-type: none"> • Improve community electrification and increase access to affordable electricity • Improved access to / provision of solar lamps • Support opportunities for women entrepreneurs in the informal sector to gain access to electricity. 	Major energy programmes work with local women's groups to identify opportunities to prevent and respond to VAWG

The evidence for what energy programmes can do to improve women's safety and experiences of violence in urban areas remains at an early stage. Some strategies to prevent violence against women, such as distributing handheld solar lamps and fuel-efficient stoves, have been mainly tried in camp-based rural settings with the exception of solar lamps in post-earthquake urban Haiti. Potential opportunities include:

Improved street lighting is often seen as a 'quick win' to improve women and girls' sense of safety, which can in turn open up their access to social and economic opportunities in urban areas.^{viii} Street lighting can have the effect of increasing the length of women's days and their use of outside space, resulting in increases in economic activity.^{ix} In India, the DFID-supported SafetiPin, a mobile app which collects data on women's safety, has encouraged urban authorities to invest in improving street lighting in dangerous locations^x (see Section 3.5 for more on the use of digital technologies). However, improved street lighting implies significant involvement of local authorities, not just to install the lighting systems but also to ensure they are maintained and pay the supplier for the electricity used.^{xi}

There have been several academic studies of the connection between light and crime, mainly in high-income countries, which have found mixed results. For example, systematic reviews of lighting experiments found that increased street lighting coincided with a drop in the affected areas' crime rates in some cities, but not others.^{xii} The researchers find little evidence that lighting works as a form of crime deterrence; rather street lights might be effective because they increase community pride and a sense of investment in the area, bring more people outside, and provide reassurance to people who were previously fearful in their use of public space after dark.

Improved access to / provision of solar lamps is most typically used in urban settings as part of humanitarian/emergency programmes, although there are some indications that there is considerable untapped need for solar lanterns in urban slum communities.^{xiii} To date, the best-studied urban intervention of solar lamp provision and links to women's safety is post-earthquake Haiti. A rigorous evaluation was conducted in two camps for internally displaced persons in Port-au-Prince, involving control groups. 95% women and girls reported using the handheld solar lamps at least once a day and said they would recommend them to friends. However, women's perceptions of their own safety remained the same or worsened after the lamps were distributed, due to broader security concerns that could not be solved by a stand-alone lamp distribution.^{xiv}

Improved community electrification and increased access to affordable electricity may have spill-over impacts on reducing violence and harassment in the household and community. Studies^{xv} of rural electrification have found that women in households with electricity report significantly lower acceptance of intimate partner violence. Researchers have theorised that access and higher exposure to information via television influences attitudes and behaviour around gender equality and violence against women. A study of rural electrification in Bangladesh found that almost everyone (98%), irrespective of access to household electricity, agreed that protective security has increased due to electrification.^{xvi} DFID's Collaborative Research Group on Gender and Energy (2006) also observed that lighting and media could affect gender cooperation in the household and reduce violence.

Major energy programmes work with local women's groups to identify opportunities to prevent and respond to VAWG. Although at an early stage, there are a few examples of innovative projects (see box below).

Case studies of mainstreaming VAWG into energy infrastructure programmes

Poland: The World Bank's Poland Hard Coal Social Mitigation Project focused on the social effects of the restructuring of the coal industry on the community by training female community leaders. The women identified how the loss of jobs for male coal workers provoked depression, substance abuse, and domestic violence. As a result, a domestic violence safe house was established.

Papua New Guinea: Women identified domestic violence as the most negative impact of the mining industry during a series of national conferences held by the World Bank. In response, the mining companies established gender desks and hired staff to engage with local women's associations. The World Bank also designed a follow up project that focused on women's empowerment as a means to prevent domestic violence in mining and petroleum communities. (Source: Willman and Corman, 2013)

How can we monitor impacts of energy interventions on women?

The following table sets out recommended indicators for use in measuring women's economic empowerment in programming and are drawn from: USAID's 2015 Toolkit on GBV prevention in energy and infrastructure programmes; DFID programme logframes; Asian Development Bank's (2013) Toolkit on Gender Equality Results and Indicators.

- Improved access to electricity by poor rural households, increased number of women having access to renewable energy supplies and nonpolluting technologies
- Improved affordability for poor households (including those headed by women)
- Increased number of women working and living in a risk-free environment
- Percentage of women represented in electricity users groups, committees, cooperatives, utility management level, energy board, and other decision-making bodies
- Percentage of women participating in policy formulation public consultation meetings
- Number of project staff and staff of energy agencies and utilities receiving gender awareness training
- Gender equality performance and VAWG prevention of energy sector agencies or utilities improved (e.g., human resources strategy)
- Sector policy or strategy explicitly highlighting gender equality

For more information on how to build in good practice for VAWG reduction into programmes please contact the ICED Facility on:

ICED Facility | iced.programming@uk.pwc.com | @icedfacility | <https://medium.com/iced-facility>

For further reading please see:

- ⁱ Dominguez Gonzalez (2016)
- ⁱⁱ ICRW (2012)
- ⁱⁱⁱ ActionAid (2013)
- ^{iv} Jagori and Women in Cities International (2011)
- ^v Mohun and Bell (2015). Public telephones can be preferable to landline or cell, as numbers may appear on bills and lead to violence.
- ^{vi} ENERGIA/DFID Collaborative Research Group on Gender and Energy (CRGGE) (2006)
- ^{vii} Willman and Corman (2013)
- ^{viii} World Bank Energy Sector Management Assistance Program (2013)
- ^{ix} Rakodi and Lloyd-Jones (2002)
- ^x ICAI (2016)
- ^{xi} It is most needed in slum areas, although public authorities often object on the grounds that service provision will legitimise an informal/illegal housing area.
- ^{xii} Farrington and Walsh (2002); Walsh and Farrington (2008)
- ^{xiii} Bhalla (2014)
- ^{xiv} IRC (2014)
- ^{xv} Sievert (2015) based on Demographic and Health Survey data from rural areas in 22 Sub-Saharan countries.
- ^{xvi} Barkhat (2002)