

Game Changers

Enhancing Sochi for the Olympic Games and Beyond





PROJECT

Enhanced infrastructure sustainability performance in Mountain Cluster and Coastal Cluster projects

CHALLENGE

Provide solutions that fulfill sustainability and environmental objectives for multiple Sochi infrastructure projects

SOLUTION

Incorporate innovative, technologybased solutions that provide consistent performance and extend the service life of infrastructure objects

COMPETITIVE EDGE

Dow solutions offer a high level of energy efficiency, longer service life and a reduced carbon footprint compared to traditional technologies and systems While the big venues like the Bolshoy Ice Dome and the Sanki Sliding Center may be the enduring iconic images of the 2014 Olympic Winter Games, athletes and other visitors to Sochi will undoubtedly appreciate the little things that make their stays more comfortable.

From the colorful paint decorating the hotel walls to polyurethane décor elements, and even consistent hot water supply and electricity – Dow products and technologies are enhancing the functionality and aesthetics of infrastructure projects in the Coastal Cluster and the Mountain Cluster.

Creating Great Places to Stay

During Gamestime, visitors from around the world will descend upon Sochi and find lodging in many of the new hotels being built. They will discover the finest lodging and amenities available, made possible in part due to the inclusion of multiple Dow products and solutions – most of which will never be seen by the end user.

Among the Dow products included in the design and construction of many hotels in Sochi are:

- DOW ENDURANCE[™] family of semiconductive and insulation materials that provide reliability and long service life to power cables
- Coating solutions, including PRIMAL™, that enable excellent adhesion and washability, as well as enhanced durability, in paints and coatings
- Construction additives, including WALOCEL™ and METHOCEL™, that facilitate a variety of desired performance characteristics, including excellent adhesion, extended durability and open time, and lower maintenance costs
- DOWLEX™ PE-RT high-performance resins (used for hot water distribution and floor heat piping systems) that provide excellent crack resistance, flexibility and thermal conductivity, while allowing the pipes to be welded
- Dow VORACOR™ polyurethane systems to create décor elements that are rigid yet more lightweight than plaster, wood or concrete, and more durable than those made of polystyrene
- Epoxy resins and hardeners, waterproofing and overlay solutions that enhance safety and extend surface life, are providing long-lasting protection and skid resistance to parking decks

Improving New Construction and Renovation

Leading up to the 2014 Olympic Winter Games, many innovative products from Dow are being used to upgrade multiple infrastructure assets in Sochi and the surrounding Krasnodar region. These include heating found in buildings in the Mountain and Coastal Clusters, as well as in many historic buildings in the region.

By applying polyurethane technology to insulate metal pipes, Dow is helping these projects achieve consistent thermal performance, extended service life and a reduced carbon footprint compared with traditional insulation systems. Dow polyurethane foam pipe insulation systems are specifically designed for pipe insulation in hot and cold water supply lines, oil and gas pipes and district heating systems. Supplied by Dow Izolan in Russia, Dow polyurethane foam pipe insulation systems are being used to insulate replaced piping in three of the region's most important historic buildings: the Cathedral of the Christ Nativity, the First City Hospital and the Drama Theater in Krasnodar.

Pipes insulated with Dow polyurethane foam insulation have been successfully installed in underground channel-free and above-ground district heating pipelines, providing outstanding insulating properties, corrosion resistance and durability.

Commitment to the Future

The many products and technologies are part of Dow's commitment to support sustainable infrastructure in the Krasnodar region. Dow also remains committed to helping Sochi 2014 meet all safety and ecological standards and enabling a memorable experience for everyone involved for years to come.

Leaving a Lasting Legacy

As a world leader in chemistry with a growing presence in Russia, Dow is leading the way in implementing technology that can reduce the country's greenhouse gas emissions in three key areas:

Infrastructure

Objective: Buildings contribute nearly 40 percent of manmade greenhouse gas emissions. Dow is helping implement improvements that help insulate buildings and significantly impact the amount of energy used to cool or heat the interior.

Agriculture

Objective: Sustainable farming practices, such as reduced tillage, can help minimize greenhouse gas emissions while also reducing soil erosion. Dow is contributing solutions and techniques that allow the soil to retain carbon and that minimize use of mechanical equipment, fertilizer and water.

Industry

Objective: Dow is working with local companies to improve manufacturing practices and increase efficiency through implementation of innovative technologies.

To Learn More

Go to www.dow.com/sochi2014 to learn more about how Dow is working with the Sochi 2014 Organizing Committee to realize multiple benefits through building and infrastructure upgrades, continued implementation of sustainable practices and increased awareness of the importance of energy efficiency.

Dow Olympic Operations Corporate Communications

2030 Dow Center Midland, MI 48674 US dow.com

Toll Free 800 441 4DOW 989 638 1006

International

Europe / Middle East + 800 36 94 63 67 Italy + 800 783 825 Asia / Pacific + 800 77 76 77 76

+ 60 37 958 3392 South Africa + 800 99 5078

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