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NBC San Diego Dials Into Cooling

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Preview Inside

NBC San Diego:

Breaking news and energy barriers

Steve Hoffmann
General Manager
NRG Energy Center San Diego

After nearly a quarter-century hiatus, downtown San Diego is back in the broadcasting game.

And the promise of a reliable supply of chilled water from the NRG Energy Center San Diego helped make it happen.

KNSD, an NBC network-owned and -operated station serving San Diego, recently became the first local television station to broadcast live from downtown San Diego in 24 years. For 35 years the station had operated from a former pen factory in an old industrial area of Kearny Mesa and was ready for a change of location.



According to Phyllis Schwartz, president and general manager of NBC 7/39's San Diego operations, "The former studio was old, outdated and falling apart at the seams. The options were either to rebuild on the same site, which is very difficult to do while you're broadcasting, or move."

Born in New York and raised in San Diego, Schwartz had come home in December 1999 to serve as president of KNSD. As a big fan of the storefront studio trend pioneered by NBC's *Today Show*, she wanted the San Diego affiliate to break out of its traditional bunker-like studio.

As a result, Schwartz directed her staff to look for a site that would better connect the station with its viewers. Her interest in a downtown location ran high. Downtown San Diego was in the middle of a renaissance. New high-rise residential buildings were changing the downtown skyline. The San Diego Padres had committed to build a new ballpark adjacent to the downtown core. Plans for several new commercial buildings were on the boards for construction in 2003. Yet, as it turns out, KNSD didn't need a brand-new building after all.

All Wired Up

Enter Steve Williams, head of Sentre Partners, the managers of 225 Broadway in the heart of the downtown commercial core. Just a few years before, the 22-story, 330,000-sq-ft building, owned by General Electric, had celebrated its 20th birthday and was starting to show its age. So Williams committed \$7 million to its renovation, transforming the building into a showcase of the latest in digital telecommunications, multimedia and personal computing technology to attract progressive, high-quality tenants.

The NRG Energy Center San Diego serves more than 4 million sq ft of retail, commercial and governmental buildings in downtown San Diego. Built in 1971 by Applied Energy, an affiliate of the local utility San Diego Gas and Electric, the system was one of the first cooling-only district energy loops in the United States.

Since being acquired by NRG Thermal Corp. in 1997, the system has grown to nearly 8,000 tons. Recent renovations to the downtown plant – particularly the addition of a York direct-driven centrifugal chiller powered by a Solar Saturn Turbine – have improved cost-efficiency, fuel diversity and reliability. The plant can generate nearly 30 percent of its peak power requirements with twin 800 kW Waukesha engine generators. Forty percent of the plant's chilled-water capacity is derived from natural gas-fired equipment.



NRG Energy Center San Diego's plant is located on Kettner Blvd., right in the commercial core of downtown San Diego. In 1999 the company commissioned a public art project to beautify the louver walls surrounding the plant's rooftop cooling towers. The result was Friezing, a nine-panel bas-relief sculpture shown here atop the building during installation in late 2000.

The three-year renovation involved numerous technology upgrades, including the installation of wireless communications infrastructure, an Enterprise Technology Center, a new fire-life safety system and a new security and surveillance system. Aesthetic improvements were made to the building's exterior and the ground-floor lobby, the garage and restrooms were remodeled, and a new energy-efficient HVAC system was installed.

To give San Diegans a taste of what they're missing during the winter, Sentre transformed the building's south-side plaza into a skating rink, ala Rockefeller Center. There, locals can cut figure eights in the shadow of the building.

When Schwartz and NBC got wind of what 225 Broadway had to offer, it was just too much for them to resist. The opportunity to move into the most 'wired' building in



The 225 Broadway Building downtown San Diego may be celebrating its 28th birthday, but it is still an important part of the skyline and one of the most 'wired' buildings in town. It is home to NBC San Diego and receives backup district cooling service.

downtown was attractive. What clinched the decision was the potential to develop the West Coast version of the Today Show, recording inside and outside the downtown building and having pedestrians look in and see television in action.

According to Schwartz, the move would provide NBC San Diego with an opportuni-

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ty to become a "21st century, top-of-the-line television station." The station was already the first network-owned station to use digital tapeless technology, and the new quarters were to be built using some "fantastic, futuristic equipment."

As host to NBC's vision for the station of the future, Sentre was challenged to ensure that 225 Broadway's building systems could

accommodate its new star tenant. The newly remodeled building was struggling with the problem of repairing its aging gas-fired absorbers. Two 400-ton Sanyo direct-fired absorbers were badly in need of a major overhaul. The units were located on the roof of the building and were difficult and expensive to replace. Repairing the units would require a significant investment of time, money and faith that the finished repair would result in a working system.

Realizing it needed supplemental service, Sentre contracted with NRG Energy Center San Diego for back-up chilled-water service while the absorbers were being repaired. The five-year contract stipulated a minimum annual usage of 300,000 ton-hours, 40 percent of the building's typical annual load.

Meanwhile, NBC dispatched engineering resources from its corporate offices in New York to evaluate the 225 Broadway building as the host site for the San Diego station. The station serves as NBC's West Coast news hub and is staffed around the clock, thereby requiring 100 percent reliability 24/7. The sophisticated equipment planned for the new location could not suffer a chilled-water supply interruption.

NBC's corporate engineers raised several concerns about the building's existing chiller plant. Not only was its performance suspect, but the plant was shut down on weekday evenings and weekends. The perfect match between NBC and 225 Broadway was in jeopardy.

But district cooling was there to provide an elegant solution to the problem.

District Cooling Takes Off the Heat

Realizing the importance of a resolution for both parties, the NRG Energy Center proposed to connect directly to the space occupied by NBC, isolating its 24,000 sq ft from the building's chilled-water distribution system. Drawing on the NRG system's

Downtown San Diego occupies a breathtaking waterfront location, warm year-round temperatures and an exciting 24-hour live, work and play environment. In 1998 San Diegans voted to approve funding for the construction of a new ballpark for the San Diego Padres to be built in an old industrial park near the downtown core. The ballpark project has motivated other commercial, retail and residential development. More than 100 redevelopment projects have been completed or begun since 1998. More than 50,000 people are expected to move into downtown San Diego in the next 10 years, changing the face of San Diego's commercial center.



Photo by Jeffrey Carmel.

Shown in the upper corner of the block, NRG Energy Center San Diego's plant currently is surrounded by construction. Its new next-door neighbor will be a 23-story glass and granite tower scheduled to open in 2005. It is the first new Class A office building in San Diego since 1991.

reliability record, NRG made the case that both NBC and the 225 Broadway would benefit from the arrangement: NBC would receive the chilled-water reliability it required 365/24/7, and 225 Broadway would not have to change its operating

behavior – it could continue shutting down its system during unoccupied hours. The building also would be able to shed a significant load from its already-strained chiller plant and avoid future problems should the chillers fail.

All parties welcomed the plan, and the match was made. NBC was now able to plan its move for fall 2001.

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Once NRG inked the contract with NBC, it went to work on connecting chilled-water pipes to the station's 24,000 sq ft of space. The design called for a separate connection and meter to isolate NBC from the building's existing back-up service. An analysis of the distribution system near the building indicated that future load growth could affect peak deliveries to NBC by moving the loop's 'null point' closer to 225 Broadway. As added insurance to support its reliability commitment, NRG installed a small booster pump to generate incremental flow during system peaks.

The service to the NBC station went on line in December 2001, and the hourly loads have been almost flat. NBC Channel 7/39 is a district cooling system's dream customer!

Subsequently, the building itself recently completed a \$630,000 project to repair the aging absorbers, and NRG continues to provide standby service under an interruptible contract. Since the completion of the project in September 2003, NRG has served the building's full load on three different occasions.

With more than 9,000 sq ft of space on the

building's ground level, the station – using service directly from NRG Energy Center San Diego – is now able to broadcast its morning, midday and weekend morning newscasts from a new studio visible to outside onlookers. The station's 5 a.m. show leads into the *Today Show*, with San Diego's mild climate permitting the station to shoot segments of this and many other programs from the plaza outside the studio. The NBC

returned to downtown San Diego.

Whether other stations will follow NBC back to downtown San Diego remains to be seen. One thing is certain: NRG Energy Center San Diego is ready to meet the reliability requirements of even the most demanding customer. Like the news, chilled-water production in San Diego never sleeps. 



NBC San Diego's new state-of-the-art streetside studio is right next to Horton Plaza in downtown San Diego. It is the city's only glass-enclosed television studio – and it is served by district cooling.

Courtesy of NBC San Diego

network coverage of West Coast events originates from the station, as did coverage of Super Bowl XXXVII in 2003.

"We are very excited about becoming a bigger part of the community we serve while still providing comprehensive coverage of the county at-large," said Schwartz. "The technological improvements we will experience with this move will position us to be San Diego's station and Web site of choice into the new century."

Recognizing the marquee value of one of the newest members of the downtown community, locals are now referring to the 225 Broadway building as the 'NBC Building.' The NBC logo graces the upper levels of the building, signaling to all that the news has

Steve Hoffmann is the general manager of the NRG Energy Center San Diego. He has been with NRG and related subsidiaries since 1998. Previously Hoffmann was a regional vice president for Energy Masters International, a leading energy services provider owned by Xcel Energy Inc. Hoffmann has been employed in the energy industry for 28 years, including 15 years with regulated natural gas utilities. He may be reached at <Steve.Hoffmann@nrgenergy.com>.