Conventional Cooling

Why will I pay for something that I do not use?!

this is the common recurring question most district cooling companies are asked by their customers. Most frequently asked in the winter, when most end-users switch off their air conditioning system, yet they have to pay for the fixed monthly fees, more commonly known as the capacity charges.

The answer to this recurring question is not well received from the customer ...why? The lack of awareness and communication from the offset plays a major role. When the building owner/developer signs a Cooling Service Agreement (CSA) with the district cooling provider, to initiate the service, the financial obligations and rights of all concerned parties are communicated, this included that of the customer (end-user) from the cooling service provider. When the building owner/developer starts to sell or lease the unit(s) to the customer, the financial obligations and rights are not always communicated plainly, from the owner/developer, thus leading to the misunderstanding and astonishment towards the cooling service provider from the customer in relation to the fees.

It is at this initial stage where the communication gap occurs i.e. the customer must be made aware, by the owner/developer, of all financial obligations before buying or renting the unit(s). Customers must be aware of their responsibilities including paying the monthly charges for the cooling service, this includes the fixed allocated cooling capacity for that unit(s). When the customer is requested to sign the Individual Cooling Service Agreement (ICSA) with the cooling service provider, clarification can be sort from the provider on any misunderstandings of the monthly charges.

DC... stands for Disseminate and Communicate

By Mohannad Khader, Director – Business Development, Qatar Cool
It is unfortunate that the miscommunication from the owner/developer, of the financial obligations of the customer clouds the advantages of district cooling, as more focus from the district cooling provider is spent clarifying the charges rather than communicating the vast advantages of the system, thus leading to the lack of knowledge or appreciation of district cooling from the customer's perspective. If the communication was more transparent from the owner/developer, it is likely that the customer will turn to be an advocate for district cooling, armed with the correct knowledge of the system and the benefits over conventional cooling (to compare apple to apple, the argument here is about an apartment/unit located in a tower using either district cooling or conventional chillers).

To name a few disadvantages of conventional cooling, the initial capital cost of the building will be greater as a result of having to install chillers, transformers, extra electrical power connections, and additional contractor profit margins. During the operations, the building owner/customer will have a higher facility management cost due to the extensive scope of work, increased electrical costs due to the additional 60% energy needed in conventional cooling consumption. Whereas these matters are eradicated by district cooling.

In district cooling the customers living in towers do not suffer from any issues related to noise and vibration. They enjoy more space by eliminating the chillers from the building, having freed space for either car parks or rooftop amenities. Aside from the environmental benefits of district cooling there are associated building cost benefits. According to our study, implementing district cooling to a tower, reduces the total building cost by 30% over 20 years.

District cooling is similar to other utilities; there are connection fees, fixed (capacity) fees and consumption fees. This applies to electrical power and water where the difference is that the fixed fees are subsidized by the government in the case of electricity and water, therefore the end user only pays the consumption and connection fees, and is rarely aware of the subsidized fees.

District Cooling providers, such as Qatar Cool, with more than 10 years of service are working to document the advantages of using District cooling, over conventional cooling. The saving of natural resources, electrical power, infrastructure and accordingly reducing the carbon footprint are to name a few. The collected data will demonstrate to the government the importance of such technology, for the suitability of the society and for a greener community. The desired outcome of such studies would be to subsidize some of district cooling costs, in order to promote the service based on its merits as oppose to the misconceptions.

In a climate like Qatar, district cooling is a win-win solution for the country, the developers, the customers and the cooling providers. District cooling needs to be recognized and viewed objectively from all parties, the vast benefits and sustainability of the system warrants recognition in the correct light. District cooling is being erroneously compared, it does not make sense to compare a building in the middle of the city with four stories with another in West Bay with fifty stories.

It is imperative for the future of district cooling when designing a city, such as, The Pearl Qatar, Lusail and Msheireb Downtown Doha to form a committee, whom will establish a clear and transparent communication plan, which will disseminate all information of the utility services, such as district cooling, with sub developers or customers before they buy the land or the property.

We cannot and should not rely on the customers to seek the obligatory information or read the fine print, it is the responsibility of the owner/developer to communication clearly and for the cooling service provider to further elaborate and support the information being shared. The lack of awareness and communication will lead to misconceptions on the customer's side in return affect relations between all concerned stakeholders.

Qatar District Cooling Company was established in 2003 with a vision to be the leading provider of district cooling services in Qatar. Serving its customers from three strategically located cooling plants and an intricate underground piping system, the company built an impressive client base that covers The Pearl-Qatar and West Bay districts. A forth cooling plant in the West Bay
district is soon to join the current plants in the continuous efforts to provide reliable sustainable energy solutions to the country.

As part of its dedication to serving the environment, Qatar Cool had accepted the challenge to design, build and operate the largest district cooling plant in the world at The Pearl Qatar, which serves apartment towers, beachfront villas and townhouses, shopping complexes, offices, schools and hotels throughout the Island, ultimately supplying 130,000 tons of refrigeration to the Island's 45,000 residents once fully occupied.

Air conditioning accounts for 70% of electricity consumption in the Middle East. Qatar Cool's system uses 50% of the energy utilized in conventional cooling systems to produce the same amount of thermal energy. Conventional cooling represents other means of air conditioning in Qatar including, air cooled chillers, packaged units, ducted split units, split unit and window type air conditioners. Qatar Cool could demonstrate thoroughly to developers, authorities, consultants and all other stakeholders the environmental and economic benefits from using district cooling systems over other systems.

A study made by Qatar Cool shows, the produced cooling capacity by all three operational plants in the past eight years, saves a tremendous amount of energy, in comparison to the conventional cooling systems. Over the past eight years we have saved over 1.9 billion Kilo Watt Hours (KWH) of electricity which is equivalent to removing over 1 billion tons of CO2 emissions. If we were to convert the CO2 savings into the number of cars we would take off the road that would equate to over 206 thousand cars.

District cooling plants are operated more efficiently with less harm to the environment by eliminating such things as carbon dioxide, possible gas leak and noise pollution. District cooling offers major environmental benefits and allows us to economize on natural resources.

Qatar Cool has won multiple international awards, including the Best District Cooling System in the World award for both districts served, from the International District Energy Association (IDEA). It was also recognized by Kahramaa’s ‘Tarsheed’, a national campaign to improve water and energy efficiency, for its energy conservation efforts in industrial buildings in Qatar.