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District Energy: An Overview of Legal Issues

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DISTRICT ENERGY: AN OVERVIEW OF LEGAL ISSUES

I. Introduction

The purposes of this paper are several: to introduce the concept of district energy and some of its basic characteristics; to examine the legal authority available to municipalities in BC for establishing and regulating a district energy system; to discuss the options for financing a district energy system; and to examine the options available for compelling owners to connect.

The intent is to provide an overview. Detailed discussion of the technical aspects of district energy is beyond the scope of this paper. Likewise, the number of issues that may potentially arise in relation to district energy, like any municipal service, is enormous, and it will not serve the purpose of this paper to attempt an exhaustive identification and discussion of them.

For practical reasons, it seems more likely that district energy systems will arise in a municipal context, since they are well suited to denser, urban environments. For that reason, as well as brevity, this paper focuses on municipal authority. However, it should be noted that regional districts have broadly similar powers in relation to the provision of services, and it would certainly not be out of the question for a regional district to embark on the provision of a district energy service, and much of the discussion in this paper would be applicable in that context as well.

At the outset, it should be noted that the author possesses no particular technical expertise on the subject of district energy, nor does the author have a background in engineering or the sciences. The technical information in this paper is primarily derived from Internet-based research, and the reader who wishes to learn more on the subject is encouraged to read the Wikipedia article on "District Heating," and from there, to explore the many secondary sources listed therein.

Also highly recommended is Brian E. Taylor's paper entitled "Green Building Initiatives: Hydronically Heated Buildings in the City of North Vancouver – From Conception to Implementation" from the 2009 Continuing Legal Education course *Renewable Resources: Regulatory Initiatives*.

II. What is District Energy?

The phrase "district energy" is something of an umbrella term, one that refers to a general concept, rather than one specific technology or arrangement of facilities. The general concept is that within a local area, a shared system that provides one or more forms of energy to multiple users can, ideally, perform the task more efficiently, cost-effectively and reliably than separate, individual systems can.

Steam power and electricity are occasionally supplied through district energy systems, but the most common form of district energy is district heating. District heating often uses a hydronic, or water-based heating system to heat air inside buildings, and may potentially supply hot water as a commodity as well, although more typically the district system's energy is used to heat a building's own water supply. Occasionally, district energy systems are used to supply cooling. The main focus of this paper will be district heating, as it is the most common type of district energy in use today.

A. General Characteristics of District Heating

1. District Heating

At the most basic level, a district heating system must consist of a heat source and a distribution system, including a heat exchanger that will transmit heat energy from the distribution medium—usually water—to the air used to heat the consumer's building.

The heat source will often consist of a central boiler or, in some cases such as the system in the City of North Vancouver, a decentralized network of boilers. The boiler may be supplemented by a co-generation plant, also known as a "combined heat and power" plant. A co-generation plant produces energy in the forms of both electricity and heat, and typically does so more efficiently than a plant that produces either one alone. Co-generation plants often utilize fossil fuels such as coal, although biomass-consuming facilities exist as well. Nuclear co-generation plants are also common in many European countries, including Russia, Ukraine, the Czech Republic, Slovakia, Hungary, Bulgaria, and Switzerland.

A district heating system may draw heat energy from other sources as well. Many industrial processes produce "waste" heat that may be harnessed for district heating purposes. Some municipal processes

and activities also result in either heat energy, or energy that may be used to create heat. Examples include sewage treatment facilities and hockey arenas, which create waste heat, and landfills, which create methane gas capable of producing heat. Solar and geothermal energy sources are possible as well.

An efficient distribution system will require insulated pipes, in order to prevent heat loss as water is delivered to consumers. The pipes would ideally be located underground, or even within buildings or parking garages, reducing their exposure to the elements, including cold air, but occasionally they may be located above ground. The location of pipes will depend on a variety of local conditions.

Heat exchangers may be large in size, transferring heat from the district system to an internal hydronic system that in turn services an entire commercial or multi-residential building, or they may be small in size, taking the form of radiators that convert hot water energy directly into warm air.

Meters will also form a necessary part of a municipal district energy system. These will perform two important functions. The first, and perhaps most obvious, is to monitor usage for the purpose of charging fees. The second function is to monitor usage with an eye to increasing energy conservation, the idea being that the more detailed information consumers have about their patterns of usage, the more likely they may be to alter their behaviour in positive ways.

In some cases, a district heating system may operate in tandem with a district cooling system. In downtown Toronto, for example, deep lake cooling technology is used to circulate water from Lake Ontario, in order to provide cool air to buildings in the area.

In terms of system layout, greater efficiency can be obtained where district energy is located in a high-density urban, environment. Clustering of development in proximity to distribution mains helps keep infrastructure costs lower on a per-consumer basis, and a mix of commercial and residential uses helps to smooth peak demand on the system, since commercial use tends to occur more during business hours while residential use tends to be greatest outside of business hours.

The location of a district energy system has legal aspects, in addition to the various practical concerns. Any infrastructure located on private property will require a statutory right of way. This might include distribution pipes and meters. In the case of a decentralized system such as the one in the City of North Vancouver, statutory rights of way may also be necessary to secure locations for boilers.

B. Advantages of District Heating

The advantages, or potential advantages of district heating over conventional individual heating systems, such as electric baseboard heaters, are numerous:

- economies of scale are achieved with larger, centralized boilers, resulting in greater efficiency and lower average costs;
- co-generation systems generate both heat and electricity more efficiently than either alone, since heat is an inevitable byproduct of electricity generation;
- “waste” heat can also be recovered from other industrial processes and municipal facilities, resulting in greater efficiency, therefore less greenhouse gas emissions;
- alternative energy sources, such as geothermal and solar energy, may be utilized, further reducing the carbon footprint;
- biomass can be used to fuel heat generation, which may result in less greenhouse gas emissions;
- diverse customer profiles (commercial/industrial/residential/institutional) create a smoother pattern of demand, allowing boilers to operate more often at optimum efficiency levels, rather than straining to meet demand spikes;

- where multiple boilers are connected to the system, service disruptions due to maintenance or equipment failure are minimized or eliminated;
- less space for heating equipment is required in buildings, freeing up space for other uses;
- use of renewable energy sources helps to insulate rates from the volatility of fossil fuel prices.

C. What's Old is New Again

District heating is not a new concept. It is solidly entrenched in many European countries, and has been for decades. Iceland, Sweden, Finland, Denmark, Estonia, Latvia, Lithuania, Poland, and Slovakia are all countries in which at least 40% of citizens are served by district heating systems. Many others have a significant number of citizens receiving district heating.

Russia has several district heating systems operating in conjunction with nuclear co-generation facilities, and has plans to develop several more. District heating systems were not uncommon in the Soviet era as well, although the lack of metering was known to result in great inefficiency, since citizens would simply open a window, rather than adjusting the heat.

Closer to home, district heating has been a feature of Vancouver for decades as well. Central Heat Distribution Ltd. is a private, steam-based district heating system that serves over 200 buildings in the downtown core, as well as the famous Steam Clock in Gastown. It was founded in 1968, and has continued to expand and develop along with the downtown core.

As part of the development of the Olympic Village, the City of Vancouver established the Neighbourhood Energy Utility, serving the South False Creek Area including the Olympic Village. This system is innovative, drawing most of its energy in the form of recovered waste heat from sanitary sewage. It also has natural gas boilers to supplement the primary energy source during times of high demand, such as the coldest days of the year.

As already mentioned, the City of North Vancouver also has a district energy system, operated by the Lonsdale Energy Corporation, a municipally owned company. It uses a network of gas-fired boilers to provide heat energy to a range of buildings, and continues to expand.

The City of Prince George recently brought into operation a district energy system primarily fuelled by biomass, in the form of wood waste, and other examples abound across BC, and Canada.

III. Legal Framework for Service Delivery

A. Municipal Authority to Provide Services

1. General Authority: Community Charter Section 8(2)

Municipalities enjoy broad powers under the *Community Charter* to provide services to their citizens. In contrast to the *Municipal Act* of days gone past, which specified in detail the types of services that a municipality was permitted to provide, the authority is now expressed in expansive terms. Section 8(2) of the *Community Charter* states as follows:

> **Fundamental powers**
>
> 8. ...
>
> (2) A municipality may provide any service that the council considers necessary or desirable, and may do this directly or through another public authority or another person or organization.

Subject to jurisdictional constraints, municipal councils are largely unfettered in deciding what sort of services they wish to provide. The basic authority to provide a district energy services arises from s. 8(2), like the authority to provide more traditional services such as sewers, water, streets, and garbage collection, to name only a few.

2. Service Bylaws: Community Charter Section 8(3)(a)

Section 8(3)(a) of the *Community Charter* provides that a municipality may, by bylaw, regulate, prohibit and impose requirements in relation to a municipal service. Sections 8(7) and 8(8), as well as s. 12, help to define the scope of the authority in relation to such bylaws. City of North Vancouver Hydronic Heat Energy Service Bylaw 2004, No. 7575 is one example of a district energy bylaw enacted pursuant to that authority.

It is significant that municipalities may exercise such a broad array of powers in relation to municipal services, in contrast to other subject matters where municipalities are more limited, such as signs and other advertising, in which case they may only regulate and impose requirements, but not prohibit, and business, in which case they may only regulate.

The City of Vancouver's Energy Utility System Bylaw No. 9552 is similar to North Vancouver's bylaw in many respects, although s. 300.1 of the *Vancouver Charter* provides a very specific authority for its enactment, including a detailed description of the scope and content of that authority. Care should be taken, therefore, in looking at Energy Utility System Bylaw No. 9552 as a precedent for municipalities governed by the *Community Charter*.

In light of the authority to regulate, prohibit and impose requirements under the *Community Charter* in relation to a municipal service, the following are some of the typical elements that may be considered for inclusion in a district energy bylaw:

- establishing the boundaries of the service area;
- establishing classes of properties that must connect, and those that may connect on application;
- prescribing standards and specifications for facilities and equipment;
- prescribing a maximum temperature for water returning to the system (the larger the temperature drop as water circulates in a building, the more efficient the design and operation of the entire system can be, and cooler water is particularly necessary for proper operation of co-generation facilities);
- providing rights to enter property for inspection, maintenance, testing, etc., in accordance with the authority under ss. 16 and 32 of the *Community Charter*;
- imposing connection charges and user fees, and billing and payment procedures, including an equal payment plan, if desired;
- providing for the recovery of unpaid fees and charges, including by way of adding them to property taxes pursuant to s. 258 of the *Community Charter*;
- establishing the right to terminate the service in accordance with s. 18 of the *Community Charter*.

An issue that should be approached with great caution, if at all, is the inclusion in a bylaw of limitations on liability, or indemnities, in favour of the municipality. It may be tempting to try to insulate the municipality from damages, but it is doubtful a court would hold such provisions enforceable in the absence of very clear statutory authority to impose them, the more so in the case where the bylaw compels connection to the system.

Another issue that should be dealt with cautiously is prohibiting the use of heating devices other than those connected with the district energy system. This goes a step beyond merely imposing requirements in relation to a district energy service, and arguably deals with the subject of building standards, which is a sphere of concurrent provincial authority. Electric baseboard heaters, for example, are recognized and their use regulated under the *British Columbia Building Code*. A bylaw that prohibits electric baseboard heaters would, by virtue of s. 9 of the *Community Charter*, require provincial approval.

3. Authority to Discontinue Service: Community Charter Section 18

A matter that deserves further comment is the authority of municipalities to provide for a right to discontinue a municipal service. On the face of it, one might suppose it reasonable to imply an authority to provide for disconnection within the general authority to provide a service, and to regulate, prohibit and impose requirements in relation to it. It seems common sense, perhaps, that if a person fails to pay their bills, they should not expect service to continue.

However, there is a long-standing body of common law surrounding public utilities that looks at the matter differently. Broadly speaking, a public utility is under a duty to serve, and the courts will not readily imply a right to discontinue service, given the vital importance of such services as power and water. An illustrative example is the case of *K-Tel International Ltd. (Receiver of) v. Greater Winnipeg Gas Co.* (1987), 46 Man. R. (2d) 181 (C.A.), in which case the gas company sought to discontinue service to the receiver in possession of the premises, on the basis that the receiver had stepped into the shoes of the former occupier who had accumulated substantial arrears on its account. The Court of Appeal, citing a number of Canadian and English cases, held that the gas company was not entitled to discontinue service in the absence of express statutory authority allowing it to do so.

The *Community Charter* clearly grants the authority for a municipal service bylaw to provide for the discontinuation of service, subject to certain limitations. Section 18 provides as follows:

> **Authority to discontinue providing a service**
>
> 18(1) A municipality may, by bylaw, establish circumstances in which it may discontinue providing a municipal utility or other service to a specific property or person
>
> (a) because of unpaid fees or taxes in relation to the service, or
>
> (b) because of non-compliance with the rules established by bylaw or contract respecting the use of the service.
>
> (2) A bylaw under subsection (1)
>
> (a) must include provision for reasonable notice, and
>
> (b) in relation to a discontinuation under subsection (1)(b), must include provision for the persons affected to have an opportunity to make representations to council.

B. Delivery Options for District Energy

1. General Municipal Service

In accordance with its general power to provide services under s. 8(2) of the *Community Charter*, referred to above, a municipality may provide a district energy system for all or part of the municipality, and may construct, maintain and administer the system directly, keeping the system "in-house."

2. Local Area Service

Section 210(1) of the *Community Charter* defines a local area service as "a municipal service that is to be paid for in whole or in part by a local service tax." Section 210(2) qualifies the scope of local area

services by providing that the only services that may be provided as such are services that council "considers provide particular benefit to part of the municipality" or "business improvement area services." In the case of district energy, it would not appear unreasonable for council to conclude that the service is of particular benefit to the service area.

Proceeding with district energy as a local area service means that the municipality will recover all or part of the cost of the system through a property value tax, or a parcel tax, or both, pursuant to s. 216 of the *Community Charter*. This can be appealing in terms of imposing costs directly on those who stand to benefit. However, it is important to note that a local area service must be established by bylaw, with the approval of the electors, and any expansion of the service area will be subject to the same requirements, a process that may become cumbersome.

3. Municipal Corporation

Utilizing its powers as a natural person, a municipality may incorporate or purchase an interest in a separate corporation to act as the vehicle for service delivery. There may be various advantages to doing so, such as tax benefits, the opportunity to draw upon external expertise by having outside directors, the opportunity to engage community stakeholders in governance, a potentially broader range of financing options, and the ability to distance the utility from the day-to-day administration of the municipality. However, s. 185 of the *Community Charter* imposes an important limitation. It requires any incorporation of a corporation or acquisition of shares in a corporation by a municipality to receive the approval of the Inspector of Municipalities. The Inspector will require, at a minimum, certain provisions in the articles of incorporation relating to:

- annual public information meetings;
- annual audit and the appointment of an auditor;
- corporate purpose;
- no amendments to the articles without the Inspector's approval;
- no incorporation of subsidiaries without approval of the Inspector and shareholders;
- availability of corporate records at municipal office;
- shareholder approval of asset disposition;
- December 31 year-end.

The Ministry of Community, Sport and Cultural Development has made available a document title "Launching and Maintaining a Local Government Corporation: A Guide for Local Officials 2006," which provides greater detail and discussion concerning the various issues involved in the process, including the role of the Inspector. It can be found at:
www.cscd.gov.bc.ca/lgd/infra/library/Local_Government_Corporations_Guide.pdf

If a municipality chooses to pursue incorporation or acquisition of a corporation, it must also enter into a partnering agreement with that corporation in order to use it as the vehicle for delivery of a municipal service.

4. Partnering Agreement

The *Community Charter* defines a partnering agreement as follows:

> **"partnering agreement"** means an agreement between a municipality and a person or public authority under which the person or public authority agrees to provide a service on behalf of the municipality, other than a service that is part of the general administration of the municipality.

In the case of district energy, a municipality might choose to partner with one or more other public authorities, with its own separate corporation, or with a private corporation. Under s. 21 of the *Community Charter*, a partnering agreement justifies the provision of assistance to a business, a practice that is otherwise forbidden in all but a narrow set of circumstances. Possible forms of assistance include disposing of land and improvements for less than market value, lending money or providing loan guarantees, and granting permissive tax exemptions. Where assistance is permitted, notice must be given in accordance with s. 24 of the *Community Charter*.

As a limit on the scope of partnering agreements, it is important to note that the municipality cannot avoid its obligation to regulate, prohibit and impose requirements in relation to a municipal service. That is a duty which cannot be assumed by a partner, since s. 154 of the *Community Charter* prohibits the delegation by council of a power that is exercisable only by bylaw. It is also noteworthy that s. 154 prohibits the delegation of any power of council whatsoever to a corporation.

5. Franchise Agreement

Section 22 of the *Community Charter* offers the possibility of granting an exclusive franchise to an outside service provider for a period of up to 21 years. A franchise may only be granted by bylaw, with the approval of the electors. The advantage of a franchise agreement is that it effectively takes the matter of establishing, financing, maintaining and operating a utility out of the hands of the municipality. The incentive to private enterprise is that it enjoys a monopoly for a period of time, allowing it a better opportunity to earn a return on its investment. A franchise for district energy would be permissible under the legislation, as s. 22(1)(d) refers to a "gas, electrical or other energy supply system."

IV. Financing District Energy

A. Revenue Sources Generally

Municipalities have a number of options available to them for raising revenue, ranging from the coercive power to levy property taxes, through user fees and charges, to the philanthropy and goodwill of citizens who donate money and property for the benefit of the public.

The range of revenue sources available to municipalities is set out in s. 192 of the *Community Charter*:

> **General revenue sources**
>
> 192. Municipalities have the following revenue sources:
>
> (a) fees under Division 2 *[Fees]*;
>
> (b) taxes under Division 3 *[Property Value Taxes]*;
>
> (c) taxes under Division 4 *[Parcel Taxes]*;
>
> (d) taxes under Division 5 *[Local Service Taxes]*;
>
> (e) taxes under section 353 *[taxation of utility company property]* of the *Local Government Act*;
>
> (f) fines and other penalties referred to in section 261 *[payment of fines and other penalties to municipality]*;
>
> (g) revenues raised by other means authorized under this or another Act;
>
> (h) revenues received by way of agreement, enterprise, gift, grant or otherwise.

Of these various sources, there are a few in particular that may be most relevant to a district energy system, as discussed below.

B. Likely Financing Options for District Energy

1. Fees

Section 194 of the *Community Charter* authorizes a municipality, by bylaw, to establish fees bylaw in respect of municipal services, the use of municipal property, and the exercise of the municipality's regulatory authority. In the case of municipal services, examples include fees for garbage collection, sewer use, and use of recreational facilities. In the case of the use of municipal property, examples might include short-term rental fees for community buildings, or event permit fees for public parks. In the case of a municipality's regulatory authority, a good example is building permit fees. The latter might be characterized as "regulatory charges" rather than "fees," based on the applicable case law.

Under s. 92(2) of the *Constitution Act, 1867*, the power of a province to levy taxes is limited to direct taxation within the province. It is axiomatic, therefore, that municipalities are similarly limited in their power to levy taxes, and more so, since municipalities only enjoy those powers of taxation that the province chooses to delegate.

Care must, therefore, be taken by municipalities to ensure that the fees and charges they impose do not exceed their statutory and constitutional authority. A purported fee that possesses the characteristics of a tax may be struck down by the courts. In *Eurig Estate (Re)*, [1998] 2 S.C.R. 565, and again in *Westbank First Nation v. British Columbia Hydro and Power Authority*, [1999] 3 S.C.R. 134, the Supreme Court of Canada endorsed a five-part test for determining whether a levy constitutes a tax, a regulatory charge, or a user fee. The first four elements of the test are identical in both cases. They ask whether the levy is:

(1) compulsory and enforceable by law;

(2) imposed under the authority of the legislature;

(3) levied by a public body; and

(4) intended for a public purpose.

If a levy satisfies all of the four elements, plus the fifth element, then a court is likely to find it to be a tax. The *Eurig Estate* and *Westbank* cases each offer a slightly different emphasis with respect to the fifth element. In *Westbank*, the focus is on a regulatory charge, therefore the question is whether the levy is unconnected to any form of a regulatory scheme, in which case it may be a tax. In *Eurig Estate*, the focus is on user fees. The Court states, at para. 21:

> Another factor that generally distinguishes a fee from a tax is that a nexus must exist between the quantum charged and the cost of the service provided in order for a levy to be considered constitutionally valid.

And further, at para. 22:

> In determining whether that nexus exists, courts will not insist that fees correspond precisely to the cost of the relevant service. As long as a reasonable connection is shown between the cost of the service provided and the amount charged, that will suffice.

When it comes to fees for municipal services, a municipality must ensure that a reasonable connection exists between costs and revenues. In the case of fees and charges related to a municipal service such as a district energy system, this effectively places a municipality in the same position as any other public utility, which is obligated to charge rates that are fair and reasonable.

2. Parcel Taxes

A parcel tax is a form of property tax specifically used to pay for a municipal service, authorized under the provisions of Division 4, Part 7 of the *Community* Charter. Section 200 sets out a number of requirements relating to parcel tax bylaws. Among those is the tax rate itself, which in accordance with s. 202(2), may be a lump sum per parcel, or a rate applicable to either parcel area or parcel frontage. This is in contrast to standard property value taxes under s. 197, which are based on the taxable value of land and improvements.

Section 201(1) of the *Community Charter* requires that a parcel tax must apply to all parcels within the municipality, unless a legislative exemption applies. However, s. 201(2) states as follows:

> **Property subject to parcel tax**
>
> 202 ...
>
> (2) In the case of a service that is provided to land or improvements, a parcel tax under this Division may be imposed only on parcels that have the opportunity to be provided with the service, whether or not they are in fact being provided with the service.

The language of this section provides a means of creating incentive for owners to connect to a district energy system, since a parcel tax may be imposed on parcels that "have the opportunity to be provided with the service." Owners may be more inclined to voluntarily connect to a service where they are paying for it in any event.

3. Local Service Taxes

As discussed above, a municipality may choose to establish a district energy system as a local area service, in which case it must be paid for, at least in part, by either or both of a property value tax or a parcel tax within the service area, and it must receive approval of the electors. Section 211 of the *Community Charter* requires, among other things, that all of the proposed means of cost recovery for a local area service be identified in the establishing bylaw.

4. Grants

With the increasing pressure to reduce carbon footprints, become carbon neutral and reduce greenhouse gas emissions, there are numerous potential funding options available to municipalities for projects such as district energy systems.

The Federation of Canadian Municipalities manages the Green Municipal Fund, a $50 million endowment fund established by the Government of Canada. The fund focuses on municipal environmental projects in five sectors: brownfields, energy, transportation, waste and water. Within these sectors, the Green Municipal Fund provides grants for plans and studies and a combination of grants and low interest loans for implementation of capital projects.

In addition, there are other federal and provincial government grant programs, which come available at various times, and are meant to act as incentives for job creation and climate change-related initiatives. Some examples of these in recent history include the "Towns for Tomorrow" and PSECA, "Public Sector Energy Conservation Agreement," both initiatives of the BC Provincial government to improve communities and reduce greenhouse gas emissions. The Green Cities Awards was another BC Government project that offered cash awards to local governments for "green" project implementations.

C. Borrowing

All of the methods of cost recovery discussed above are possible means of financing district energy systems in the long run. However, given the fiscal climate in which municipalities operate, it is unrealistic to expect them to "save up" revenues in anticipation of constructing a district energy

system at some future time. Moreover, the demand to find ways of combatting climate change is both urgent and present. Realistically, given the capital-intensive nature of a district energy system, it is likely that the short term financing of such a system will occur by way of borrowing.

It is beyond the scope of this paper to provide any detailed discussion of municipal borrowing. Division 3, Part 6 of the *Community Charter* details the various restrictions and requirements, and the *Municipal Liabilities Regulation*, B.C. Reg. 254/2004 contains important restrictions as well.

V. Compelling Connection to District Energy Systems

A. Imposing Requirements Directly

As discussed above in Part III of this paper, s. 8(3) of the *Community Charter* gives municipalities the authority to regulate, prohibit and impose requirements in respect of municipal services. A straight reading of that language would support the proposition that a municipality providing a district energy system as a municipal service may simply compel property owners to connect to it. The corollary would be that property owners who failed to connect as required would be subject to penalties, and possibly prosecution under the *Offence Act*.

Support for this interpretation is found in s. 8(8) of the *Community Charter*, which lists examples of the power to regulate, prohibit and impose requirements. Among those examples listed is the power to require persons to do things with their property, and to require them to do things at their expense.

A municipality determined to push the matter to its legal limit could, in reliance on the power under s. 17 of the *Community Charter*, carry out the connection work itself then recover the costs of doing so in the same manner as property taxes.

The power to compel property owners to connect to a municipal utility is nothing new. For example, the 1979 version of the *Municipal Act*, in relation to sewer systems, had the following to say in s. 611(5)(b):

> The council may by bylaw ... require owners of real property to connect their buildings and structures to the appropriate sewer or drain connections in the manner prescribed in the bylaw, and, in the event of an owner failing to make the necessary connections within a specified time, provide for having the work done at his expense.

The power formerly given to municipalities specifically in relation to sewer systems, and certain other services, has now been subsumed within the general power to regulate, prohibit and impose requirements in relation to municipal services.

However, it must be recognized that the realities of political accountability will always operate as a check on what is otherwise a potentially draconian power. A council that imposes a district energy system without the support of a majority of the citizens affected will face the consequences at the next election. Unless a municipality has gone the route of establishing a local area service, which of necessity entails obtaining the approval of the electors, then the prudent council may wish to rely on less heavy-handed options to connect property owners to its district energy system.

B. Subdivision and Development

Municipalities have the power under s. 938 of the *Local Government Act* to impose works and services requirements in relation to the subdivision and development of land. That power, however, is restricted, since s. 938(1) sets out an exhaustive list of the types of services that may be required. The list includes such services as highways, sidewalks, street lighting, sewage and drainage systems, and, perhaps more significantly for present purposes, a "water distribution system."

It is perhaps arguable, at least, that a hydronic heating system, which by definition must distribute water in order to function, would fit within the meaning of "water distribution system" for the purposes of s. 938. Of course, that argument has yet to be tested in the courts, and the question that might arise is whether the distribution of water is the dominant purpose of a hydronic heating system, or merely an ancillary result, and if so, whether that matters for purposes of s. 938. A court might look at the description of utility services for which a franchise agreement might be entered into under s. 22 of the *Community Charter*, and note that an "energy supply system" is mentioned as something distinct from a "water supply system."

A hydronic heating system that also supplies hot water as a commodity to its customers might have a stronger chance of withstanding scrutiny under s. 938. However, given the ability to impose requirements in relation to a municipal service directly, as discussed above, it would not appear worth the risk to use s. 938 of the *Local Government Act* in a manner that may be *ultra vires*.

C. Rezoning

An application to rezone property may provide a municipality with an excellent opportunity to obtain a commitment to connect to its district energy system, and to secure that commitment by means of a covenant registered against title to the land pursuant to s. 219 of the *Land Title Act*. Such a covenant could be used not only to require the installation of a hydronic heating system within a building, and to require its connection to the district system, but also to prohibit the use of other heating systems in the building, which would assist the district energy system to operate efficiently and keep rates low.

As is the practice in the City of North Vancouver, it also makes sense to pair a s. 219 covenant with a statutory right of way, giving the municipality the right to locate its portion of the infrastructure, including a meter, on the property, and to access the property as necessary.

The practice of securing commitments such as these through the rezoning process must be approached with caution, however. It's not as simple as the municipality saying "you are required to connect to the district energy system in order for your rezoning application to be approved." A covenant entered into under those circumstances would unlawfully fetter council's legislative discretion, and would be unenforceable.

The correct approach is for planning staff to communicate to a developer that council is likely to look more favourably on an application to rezone where the developer has agreed to connect to the district energy system. This is not to say that council is forbidden from considering connection, or lack thereof, to a district energy system when deciding the fate of a rezoning application. To the contrary, it seems fair to argue that it would be a legitimate planning consideration. However, council's decision cannot be pre-determined. Council must, when giving consideration to a rezoning bylaw, remain capable of persuasion. The cases of *Burnaby (City) v. Racanelli* (1998), 45 M.P.L.R. (2d) 117 (B.C.S.C.) and *Burnaby (City) v. Marando*, 2003 BCCA 400 provide examples of the correct approach being approved by the courts.

D. Amenity Zoning

It would also be possible to create a density bonus scheme pursuant to s. 904 of the *Local Government Act*, through which a developer could obtain additional density in exchange for connecting to the district energy system as an "amenity."

"Amenity" is not a defined term for the purposes of s. 904, but its ordinary meaning is likely broad enough to encompass participation in a district energy system. There are benefits to the greater community, in that more users means lower rates for all, and also that district energy may be seen as more environmentally friendly than other forms of heating. As set out in s. 7(d) of the *Community Charter*, the purposes of a municipality include fostering the economic, social and environmental well-being of its community.

Section 904(2)(a) of the *Local Government Act* permits a zoning bylaw to include conditions relating to the conservation or provision of amenities, and this would be a means for requiring a s. 219 covenant and statutory right of way as part of the "amenity" to be provided.

E. Disposition of Municipal Lands

A municipality with surplus lands within the service area can dispose of them subject to a requirement that a section 219 covenant and statutory right of way be registered on title at the time of transfer, as was the case in the City of North Vancouver, where the City held a number of properties in the service area and was thus able, through disposition of them, to create some "momentum" for its nascent district energy system.

VI. Conclusion

District energy is, in some respects, analogous to municipal law. It has been around for a reasonably long time, yet is currently being revitalized and renewed, expanded in its scope, and drawn upon to address problems that were virtually unknown in all but the most recent of human history. It is often observed that the impetus to effect positive change for the global environment is felt most acutely at the local level. District energy, as the name itself implies, is one possible local strategy for combatting climate change, and one that is receiving increasing attention.

Municipalities in BC are actually well positioned to establish district energy systems. The systems tend to be capital-intensive, and to require significant initial investment, while returns on that investment only materialize in the longer term, which make them less attractive to private enterprises that tend to be focused on short-term gains. Municipalities are not driven by the profit motive, and are therefore more likely to consider a district energy system for its longer-term economic benefits, as well as other benefits that are not necessarily measured in dollars and cents, such as energy efficiency and reduction in greenhouse gas emissions. Municipalities also have the advantage of complementary statutory mandates: the mandate to provide services, and the mandate to regulate them. Thus, a municipality can exercise a significant level of control over the entire district energy system, and tailor it to best fulfill the needs of its community.