

Client Alert

Global Transactions Practice Group

July 2016

Planning, Tendering and Closing Global District Energy Projects

The district energy industry has received a global boost through a global initiative supported by the United Nations Environment Programme (UNEP). The UNEP has called for governments, state owned enterprises and procuring authorities all around the world to rapidly develop modern and affordable district energy systems to reduce carbon emissions and to keep global temperature rise to within 2 degrees Celsius by 2050. Individual countries are also embracing energy efficiency policies which include modern and renewable energy systems. Further, global industry associations, such as the International District Energy Association, are increasing in influence and provide support to their members in developing district energy projects.

The collective objective is to achieve sustainable energy through accelerating district energy projects in cities around the world. This is an enormous task. The UNEP's initial focus is to support the developing of district energy projects in 16 'deep dive' cities throughout India, China, Chile and Serbia. In addition to this, there are another 17 countries that will seek to develop pilot projects in cities throughout Europe, North Africa, Asian and Latin America

Some of these countries are affected by the low oil price environment. Most are affected in some way as a result of the current global economic uncertainty. These are just two of the drivers leading governments, state owned enterprises and procuring authorities (Procurers) to embrace private financing, including through public private partnerships (PPPs), to help deliver their district energy projects.

So how do Procurers of district energy projects go about attracting private sector investment for their district energy projects? One method is a sole sourced or bi-lateral negotiation. Another method is to run a competitive tender process. This article explores competitive tendering.

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We provide some key considerations for all procurers of district energy projects when embarking on competitive tender processes for their district energy projects. Our “Top 10” tendering tips are not exhaustive, but cover what we feel, based on experience, are critical steps for the successful delivery of district energy projects.

The Benefits of Competitive Tendering

At a government level, competitive tendering exists due to the over-riding duty on all governments to manage the public purse effectively. A central component of this is that all public infrastructure procurements should be focussed on obtaining the best value for money. This can generally be described as obtaining the best blend of commercial and technical quality for the least financial outlay over the period of the project.

The same applies for privately tendered projects, whether they involve district energy systems supporting mixed use real estate projects, universities, schools, hospitals, hotels, malls, airports or industrial real estate. For the purpose of this article, we call all of these public and private sector entities “**Procurers**” of district energy projects.

A key consideration for any Procurer is to align the procurement process with any local procurement laws and regulations (or internal procurement rules). These tendering laws (and rules) are usually designed for more traditional procurement methods, not privately financed infrastructure projects such as PPPs. In some instances, specific district energy laws have been enacted to either override traditional tendering laws or to compliment these in a way that provides certainty for the public and private sectors embarking on such projects. In any event, legal advice will need to be sought to confirm the application or otherwise of such laws and rules and to confirm the procurement route.

Top 10 Tendering Tips

A district energy project may be undertaken to support the space heating and cooling in a range of buildings and sectors: from Government buildings, commercial, residential and retail real estate, industrial facilities, transport, healthcare, education, IT and defense. In many jurisdictions around the world, there is no state or national district energy company. Consequently, it is often left to the developer of the particular real estate (public or private) to initiate their own district energy project.

Sector	Examples of who is the ‘Procurer’ of the District Cooling or District Heating Project
Government Buildings	<ul style="list-style-type: none"> Government entities that own buildings where government staff work (offices etc), local and municipal buildings, courts, correctional services etc
All forms of Real Estate	<ul style="list-style-type: none"> Master Developers and Developers of any form of real estate including mixed use projects, but also malls, offices, apartment blocks, schools, universities, colleges, hospitals, and any other form of real estate requiring space heating or cooling
Industrial	<ul style="list-style-type: none"> Owners and developers of industrial infrastructure and processes
Transport	<ul style="list-style-type: none"> Department of Transport SOEs and other Procurers in the Road, Rail, Airport & Port sectors (including logistics, catering, cargo etc)
Healthcare	<ul style="list-style-type: none"> Department of Health SOEs and other Procurers involved in healthcare, including public hospital owners Private sector developers and owners
Education	<ul style="list-style-type: none"> Department of Education SOEs and other Procurers involved in education, such as schools, universities, campus colleges and training institutions Private sector developers and owners
ICT/Data Centres	<ul style="list-style-type: none"> Department of Communications and Technology SOEs and other Procurers involved in telephony, communications, data/IT
Culture	<ul style="list-style-type: none"> Department of Cultural Affairs SOEs and other Procurers who may be owners or managers of cultural assets, museums etc
Accommodation	<ul style="list-style-type: none"> Department of Housing SOEs and other Procurers involved in social and affordable housing schemes, or residential/student accommodation providers in other sectors (eg university housing) Private sector developers and owners
Defense	<ul style="list-style-type: none"> Department of Defense SOEs and other Procurers involved in the defense sector

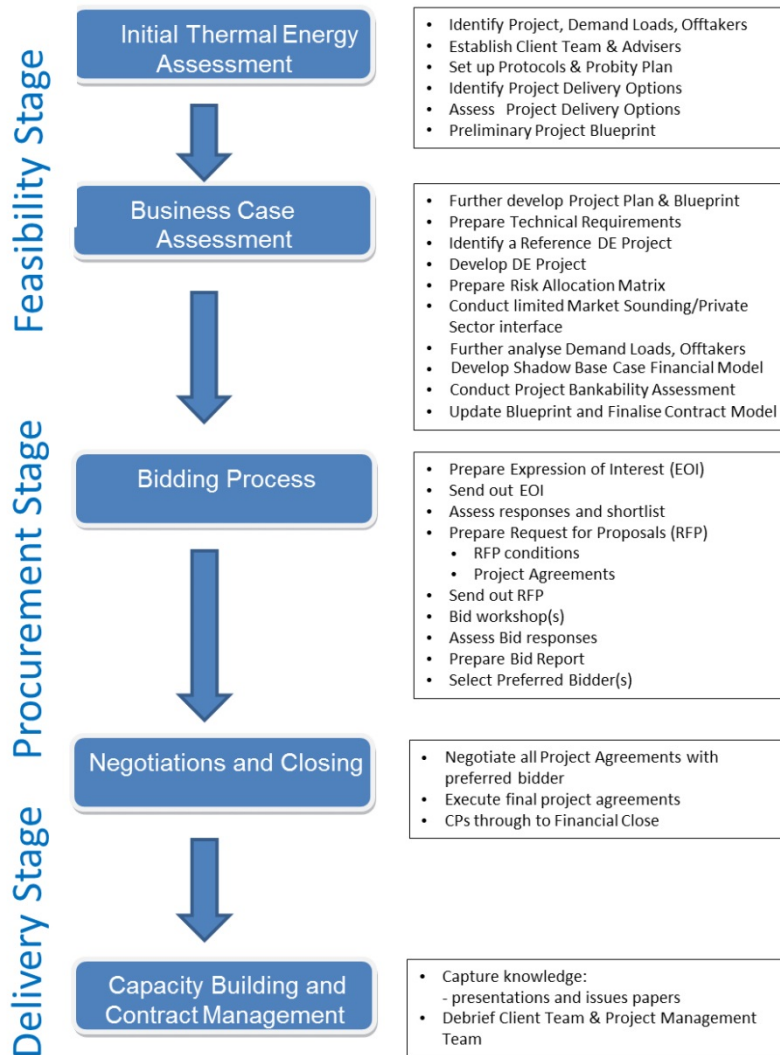
In our next article, we provide tips to district energy companies, investors, funds and contractors in approaching RFPs for district energy projects.

1. Develop A Comprehensive District Energy Procurement Plan

Undertaking a tendering process for a district energy project is not simply a matter of issuing an RFP to a series of qualified builders to build a district cooling plant or network. The process starts with a need for space cooling or heating. That need develops into a plan, with objectives. That plan is then tested and further developed to ensure the project is viable and delivers value for money. Only at this stage is a tendering exercise undertaken.

Accordingly, the most important part of running a competitive procurement process is the work undertaken prior to the tender process commencing. A well thought out procurement plan ensures a high quality level of organisation throughout the process and will be well received by bidders.

Generally, there are three stages in the district energy tendering process: (1) feasibility; (2) procurement; and (3) delivery. Set out below is a process map with a description of each of these stages, together with the deliverables and outcomes:



A Procurer’s two initial considerations prior to starting any project should include these important two steps:

- a) **procurement team:** competitive procedures require commitments in terms of time and resources. Procurers need to give serious consideration to the amount of man-hours it can commit to the process. An individual should be appointed to lead the client team throughout the entire process. Given the inherent complexity of district energy projects, Procurers should engage external legal, technical and financial advisors early in the process; and
- b) **procurement timescale:** procurement processes are invariably driven by time. An unrealistic or expedited timeframe runs the risk of leading to mistakes or the receipt of rushed and inaccurate bid submissions and re-tendering.

The output from the feasibility stage will be a preliminary *procurement plan*. This is a blueprint by which all Procurer stakeholders can refer at any stage of the procurement process. The blueprint will address:

- a) an overview of the district energy project, including a description of the infrastructure and services required;
- b) the objectives of the Procurer and any commitments (eg delivery of the distribution network);
- c) demand load assessments and identification and assessment of offtakers/customers;
- d) legal and commercial structuring & procurement options;
- e) recommended contractual arrangements; and
- f) an implementation step-plan, including timescales.

If a procurement plan is not developed, this is not fatal. It may, however, lead to delays to the process and increased costs later, in the form of additional advisory fees, higher bids costs and pricing and potentially bidder withdrawal.

2. Feasibility Stage: Conduct a ‘Project Bankability’ Test

Prior to tendering of the district energy project, the most effective method to test the project’s ‘bankability’ is to internally test whether the commercial solution being sought will attract private sector interest and investment.

The purpose is to ensure the Procurer’s objectives can be met and that they align with the expectations of potential bidders. This can only be performed with experienced technical, financial and legal advisors who have successfully delivered district energy projects. Conducting a project bankability test will give reassurance to Procurers that their proposed district energy project will be attractive to the market and will attract bids.

3. Feasibility Stage: Develop a Robust Output-based Technical Specification

District energy projects requiring private finance and long term operation and maintenance are very different from traditionally procured construction contracts. The former are focused on outcomes which best meet the needs of the Procurer. These needs are generally articulated in the form of an “output specification”. Unlike traditional methods of procurement which tend to have input-based specifications, the underlying philosophy in district energy projects is to focus on *output-based* specifications.

Output-based specifications afford bidders as much flexibility as possible to propose innovative, cost-effective designs. This is approached on a *whole of life* basis, taking advantage of new technologies and techniques. A *whole of life* basis means bidders are required to manage and maintain the district energy system over the life of the project (maybe 25 or more years). In traditional procurement, a bidder is a building contractor who would focus on its obligations during the construction period (eg 12 months) and so may select the cheapest chillers and other equipment, on the basis it is not responsible for the operation and maintenance aspects of the district energy system.

As a minimum, Procurers should ensure that the output-based specification contains:

- a) a clear description of the scope of the thermal energy services;
- b) a clear description of the specific service requirements; and
- c) performance standards (sometimes called Key Performance Indicators or KPIs) for each service, which are then linked to a performance monitoring regime.

4. Feasibility & Procurement Stages: Conduct a Market Sounding Exercise / Expression of Interest

Unless the Procurer has no time to conduct a market sounding exercise, the Procurer should conduct an open day, or series of supplier meetings, market sounding questionnaires, and meeting potential interested bidders. Later, it can also issue a formal expression of interest (**EOI**) document.

An EOI is effectively a high-level “teaser” published by an Procurer to generate prospective bidders to register their interest in participating in the district energy project. It is usually anywhere from 3 to 10 pages in length. No pricing is required from bidders at this stage; rather, responses to the EOI helps Procurers determine if prospective bidders have the technical capacity to deliver the project, should they be invited to bid.

Broad publication ensures that Procurers are aware of the market potential. This is especially relevant for those Procurers with minimal experience in delivering district energy projects. It is also relevant for private sector bidders who have been encouraged through the growth in the global district energy market and who are seeking to expand their operations or establish themselves.

Conducting a market sounding exercise and an EOI exercise will allow a Procurer to sense check that the opportunity is attractive to bidders. It will also ensure there is sufficient interest in the district energy project to justify the procurement process, which can be long and costly. It also allows bidders to start planning before a formal request for proposals is issued.

5. Procurement Stage: Shortlist Bidders

A Procurer will normally pre-qualify bidders based on technical experience after bidders have provided responses to an EOI. Best practice suggests that five (but perhaps up to seven for pathfinder projects) short-listed bidders are sufficient to maintain a competitive tendering environment, whilst covering the risk of withdrawal by one or two short-listed bidders.

Many bidders will in fact be consortia of multiple-parties including sponsors, infrastructure funds, district energy service providers and perhaps EPC contractors.

In countries where there have not been any (or few) district energy projects, there may not be enough suitably qualified local district energy companies to bid, so invitations will need to be sent internationally. This is appropriate. Indeed, as the district energy market expands globally into new countries, experienced district energy companies will be attracted to these new markets and can offer experience and proven technology.

6. Procurement Stage: Conduct an RFP Process and Prepare Tender Versions of Legal Agreements in Advance

The cornerstone of the procurement stage is the tender document itself. This is called the request for proposal (**RFP**).

The RFP for a district energy project is an inherently complicated document and has specific differences to RFPs for other utilities and also for traditionally procured infrastructure projects in other sectors. Examples of these differences lie in the fact there are numerous components to a district energy system (which may be procured by different parties), the tariff/payment mechanism, unique operational elements (eg interruptions of service), financing requirements and end of term arrangements including termination payments. The nature, complexity and importance of the RFP document means that a Procurer needs to allow sufficient time to prepare the RFP with assistance from experienced legal, technical and financial advisers with track records in district energy project delivery.

The RFP establishes how the procurement will be conducted and the key milestones and rules with which all parties will be need to adhere. The Procurer should ensure that the RFP document accurately identifies its anticipated needs and the minimum requirements to enable bidders to gain an informed appreciation of the district energy project. Particular areas of importance include (i) an outline of the district energy project and its various components, (ii) the tendering schedule, (iii) a description of the payment mechanism, detailed submission requirements and evaluation methodology.

It is critical that the Procurer’s legal advisers draft tender versions of the project legal agreements and that these are included as appendices to the RFP. If time constraints will not permit this before the RFP is issued to bidders, then Term Sheets or Heads of Agreement should, as a minimum, be included in the RFP document when it is issued. This latter approach is not recommended, as it will invariably add further time and expense, given full project legal agreements will be later issued as addenda to the RFP.

The project legal agreements will vary depending on which district energy business model is adopted, but in our experience, the following key legal agreements are required:

Agreement	Description
Host Government Agreement	<ul style="list-style-type: none"> Depending on the location and regulatory regime, there may need to be some level of host support for the project through either agreement or legislation.
Thermal Energy Purchase Agreement (TEPA)	<ul style="list-style-type: none"> Sometimes called a ‘Master Agreement’, ‘District Energy Agreement’ or ‘Project Agreement’. This is the key project agreement governing the rights and obligations of the Procurer and the Private Sector Party. For CHP/Trigen projects, if there is surplus power produced by the district energy plant, then there will also be a PPA and Interconnection Agreement with the local power utility. If the district energy system is ‘captive’ (ie it is sized to service the power needs of the district energy plant itself and captive customers) then there will be no PPA or interconnection agreement. Rather the power and thermal energy offtake is dealt with in the TEPA.
Bulk Thermal Energy Services Agreements (TESA)	<ul style="list-style-type: none"> This is called a ‘Cooling Services Agreement’ in district cooling projects, and also sometimes called an ‘Offtake Agreement’. Depending on the contractual model adopted and any local strata laws and regulations (including for common owners associations), two or three different types of TESA may be required: for commercial, retail and residential customers.
Lease Agreements	<ul style="list-style-type: none"> This is for the plot where the District Energy Plant will be sited. Another lease or right of access agreement will be required for the Distribution Network if this is owned by the Procurer. If it is developed and owned by the Private Sector Party, then an easement or access agreement for the corridor will be required.
Ancillary agreements and schedules	<ul style="list-style-type: none"> These include Direct Agreements (lenders, key project parties), an independent certifier agreement, interface agreements, and various forms of bonds, collateral warranties and novation agreements. Schedules for information in both the RFP and the TEPA/TESAs will include complex tariff mechanisms, termination payment regimes, thermal energy demand load projections, change procedures, proposed location plans and corridors, design documents (if the Distribution Network design and/or construction has commenced), information on customers and their real estate developments, insurance requirements, handback requirements for BOTs, and the Procurer’s standard policies.

Preparing tender versions of these project legal agreements allows bidders to assess the project's risk allocation and to take steps to manage their liabilities and risks. If these project legal agreements are not included, bidders may not bid, or may bid but reserve their position on all development and operational risks. Additionally, bidders will usually submit pricing on the basis of a certain risk allocation between the parties. As such, when the legal agreements are later submitted, bidders will seek to adjust their pricing if their assumptions are not met.

7. Procurement Stage: Post Bid Dialogue Sessions

After the RFP is issued, but before bids are received, it is not uncommon for the Procurer to enter into dialogue with bidders. These are usually described as bid clarification sessions and they allow bidders to discuss points of clarification, to discuss technical solutions, to sense-check aspects of their proposals. These sessions can provide critical feedback to the Procurer and its advisers. Because of the technical nature of district energy projects, and the fact Procurers may have no prior experience in such projects, listening to bidders discuss their proposals and raise technical queries and options, may lead to an improved solution for the Procurer.

For district energy projects with tight lead times, these sessions can be time consuming and provide a logistical challenge for the Procurer. Momentum can be preserved, however, through effective planning. This can be done by sending out an agenda identifying topics, individuals required, outputs required and periods of time for each bidder to present. Suggestions might include:

- a) **commercial:** this part of the session addresses issues such as the financial model, financing issues, and tariff issues.
- b) **technical:** this part of the session addresses issues such as key performance indicators, quality standards and performance management, as well as queries on any technical issues in the RFP.
- c) **legal:** this part of the session addresses issues such as project contractual structure, questions on risk allocation and bid compliance.

This approach has the added advantage of efficiently managing resources and not requiring all individuals within the Procurer client team to be present during all discussions.

It is important in these sessions to treat all bidders equally and to ensure that the sessions are followed up with a formal addendum to all bidders with clarifying points.

8. Procurement Stage: Clear Evaluation Methodology

The evaluation methodology refers to the criteria used in an RFP process to evaluate the tender that is the most advantageous to the Procurer.

The two main areas of evaluation are usually (1) commercial; and (2) technical. Within each of these areas, there will often be sub-criteria relating to particular requirements of the RFP. Sub-criteria are typically allotted percentage weightings to reflect their importance. The tenderer submitting the bid which scores the highest marks after being assessed against the evaluation methodology will usually be appointed the preferred bidder for the district energy project.

Sample technical evaluation criteria might include:

1. Bidder's experience of district energy projects completed (inside and outside the host country);
2. Robustness of Bidder's technical method statement and plant design philosophy; and
3. Robustness of Bidder's proposed implementation schedule.

Sample commercial evaluation criteria might include:

1. Net Present Value of future payments under the proposed tariffs (or a purchase price for a partly build system that is to be taken over by the bidder);
2. Bidder's assessment of the load requirements for all Customers;
3. Robustness of Bidder's financing methodology; and
4. Bidder's comments on the Project Legal Agreements.

Each category will be given a score of 0 - 100 based on certain criteria, with 0 for non-submission up to 100 for an excellent response meeting all criteria with no exceptions. Specific formulae is then used to calculate the weighting and to determine the bidder with the most advantageous proposal according to the Procurer's objectives. The evaluation process should be subjected to testing prior to the launch of the RFP. This can be undertaken by passing 'mock' bidder scores through the evaluation model to identify any potential problems with the process.

The bid report, which is prepared by the Procurer's legal, technical and financial advisers will contain summaries of each bid and their recommended rankings, which is then used to assist the Procurer in its selection process.

One final point to keep in mind for evaluation of bids is to ensure that when issuing the RFP, the Procurer limits the areas for comparison between bids, so it can compare '*apples and apples*'. For example, there are usually three components to the tariff in a district energy project: the connection charge, the demand charge and the consumption charge. A Procurer might ask bidders to price one (sometimes two) of those charges and will be given an assumed input for the other(s). If the bidders are asked to price all three charges, the Procurer will receive a range of pricing across all three charges, which makes it very hard to compare bids. Allowing too much scope for differences in bids can lead to a delay while the Procurer tries to makes sense of the various bids.

Finally, allowing bidders to submit alternate commercial/technical proposals is one way to allow innovation from the private sector, but such alternate proposals should always be accompanied by a compliant proposal.

9. Procurement Stage: Limit Scope for Negotiations

Experienced legal advisors will ring fence negotiation points prior to the preferred bidder letter award. This process is usually crafted within the RFP conditions of tendering. It is not uncommon for a preferred bidder to seek to open up points of risk once the competitive environment has concluded, so it is critical to ensure that all outstanding legal, commercial and technical points are clearly understood and where possibly, that steps are taken to fend off challenges after the preferred bidder is selected.

Procurers can do this by:

- a) **avoid revisiting agreed issues or introducing new ones:** the Procurer should enforce a strict rule prohibiting the preferred bidder from admitting any new issues into negotiations (i.e. issues not raised previously in the bids) and the parties should not re-open issues already agreed upon;
- b) **involve lenders during the negotiation/dialogue stage:** it is not uncommon for the preferred bidder to seek changes to the project legal agreements which are attributable to the demands of the bidder's lenders, particularly if the lenders have not been sufficiently involved in the bid process. The scope for such lender mandated changes can be limited by requiring bidders to ensure that their lenders have reviewed the RFP and the key project legal agreements and that the bidder's comments take into account any requirements of the lenders;
- c) **agree a timetable for the negotiation:** establishing a timetable for negotiations will limit the scope for delaying tactics and ensure the overall timetable for the project is upheld;
- d) **reserving the right to negotiate with alternative bidder(s):** the prospect of a reserve bidder waiting in the wings in the event that negotiations with the preferred bidder fail, or indeed keeping two preferred bidders, often helps to retain a sense of competitive tension during contract negotiations. However, this can come at a cost;
- e) **issuing a preferred bidder letter:** this is a letter signed by the preferred bidder that documents all of the above points, particularly those outstanding issues to negotiate and each party's corresponding views. A form of this should be included in the RFP.

Following the above steps will help an Procurer manage and control the closing out process from the preferred bidder stage through to contract signing and financial close.

10. Delivery Stage: Capacity Building of Procurer Staff

Major infrastructure projects will be new to some Procurers, who may have traditionally procured their infrastructure assets through traditional means. Indeed, some individuals within Procurers and indeed within centralized project management offices, may be embarking on their first 'pathfinder' major infrastructure project. It is therefore important that the Procurer's external advisers guide their clients through each project step and thereafter help to build internal capacity for future projects.

Through maintaining records of steps and problems that arise and crucially, how such problems are resolved, will facilitate capacity building and help Procurers run future processes more efficiently. Workshops, issues papers and "lessons learned" papers are all tools that are routinely used by experienced advisers to help their Procurer clients build internal capacity.

Conclusion

The above are some of the key considerations we believe will help Procurers successfully deliver their district energy projects. Our tips are not exhaustive, and proper legal advice should be sought in all cases.

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King & Spalding's District Energy Practice involves lawyers that specialize in all aspects of district cooling and heating, co-gen, tri-gen and other distributed and centralized energy projects. Their team has structured, documented and negotiated over 45 global district energy schemes.

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