



on the basis of a decision  
by the German Bundestag

## POLICY BRIEF

# APPLICABILITY OF GOODS AND SERVICES TAX (GST) TO DISTRICT COOLING PLANTS IN INDIA

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## 1. INTRODUCTION

District cooling plants represent a significant leap forward in urban infrastructure and energy efficiency for India's rapidly growing cities. These centralized facilities provide cooling services to multiple buildings or entire districts, offering potential advantages in energy consumption, operational efficiency, and environmental impact. As India continues to develop its smart cities and emphasize sustainable urban planning, the role of district cooling plants becomes increasingly prominent.

These centralized systems produce and distribute chilled water through underground pipelines to multiple buildings for air conditioning purposes, achieving higher energy efficiency compared to conventional cooling methods. By leveraging economies of scale, thermal storage, and advanced technologies like absorption chillers, DCS significantly reduces electricity consumption, peak load demands, and greenhouse gas emissions. The systems also eliminate the need for individual building chillers, freeing up valuable real estate space and reducing maintenance costs. In the context of rapid urbanization and increasing global temperatures, DCS emerges as a crucial solution for sustainable urban development, particularly in hot climates where cooling demands constitute a substantial portion of energy consumption.

However, the widespread adoption of District Cooling Systems faces significant financial hurdles, primarily due to the substantial initial capital investment required for infrastructure development. The current scenario involves extensive costs for establishing central cooling plants, distribution networks, and energy transfer stations, leading to payback periods typically ranging from 13–16 years at prices that are comparable to the existing prices. The application of Goods and Services Tax (GST) on these projects impacts their financial viability by increasing the overall project cost, extending the payback period and leaving a reduced margin for the DCS developer to recover the initial cost of investment. A reduction or exemption of GST on DCS projects could significantly improve their financial attractiveness by shortening the payback period by approximately 2-3 years. This fiscal incentivization would not only make these projects more appealing to investors and developers but would also accelerate the scalability of DCS implementation across cities.

The application of Goods and Services Tax (GST) to these facilities is a complex matter that requires careful consideration of various factors. This policy brief aims to provide a comprehensive analysis of the GST implications for district cooling plants, covering legal, technical, financial, and environmental aspects. The objective is to offer policymakers, industry stakeholders, and tax authorities a thorough understanding of the challenges and opportunities presented by the GST regime in relation to district cooling infrastructure.

## 2. LEGAL FRAMEWORK

The Goods and Services Tax, implemented in India on July 1, 2017, marked a paradigm shift in the country's indirect tax structure. GST subsumed a multitude of central and state taxes, aiming to create a unified national market.<sup>1</sup> The GST is meant to create a single taxation system across India by unifying a set of at least 16 national, state, and local taxes such as excise, service tax and value added tax.<sup>2</sup>

One of the key goals of the Goods and Services Tax (GST) was to eliminate the cascading effect of taxes. Previously, due to the existence of various indirect tax laws, taxpayers were unable to offset the tax credits of one tax against another. For instance, excise duties paid during manufacturing could not be offset against the Value Added Tax (VAT) payable during sales, resulting in a cascading tax effect. Under GST, taxes are levied only on the net value added at each stage of the supply chain. This reform has effectively removed the cascading effect of taxes and facilitated the seamless flow of input tax credits across both goods and services.<sup>3</sup>

Under the previous tax regime, the cascading effect of taxes resulted in higher prices for goods in India compared to global markets. Additionally, varying VAT rates across states caused an imbalance in purchasing patterns. The implementation of uniform GST rates has addressed these issues, leading to more competitive pricing both domestically and internationally. This uniformity has boosted consumption and increased revenues, achieving another significant objective of the GST reform.

<sup>1</sup> GST: A unified India for business - Available at: <https://www.livemint.com/Opinion/JBrZWYtutXfzM9r8aQvdzJ/GST-a-unified-India-for-business.html>

<sup>2</sup> India's GST rollout: creating a national market - Available at: <https://foreignbrief.com/indias-gst-rollout-creating-national-market/>

<sup>3</sup> <https://cleartax.in/s/gst-law-goods-and-services-tax>

The legal framework for GST comprises several key components:

- Central Goods and Services Tax Act, 2017 (CGST Act)
- State Goods and Services Tax Acts of various states (SGST Acts)
- Union Territory Goods and Services Tax Act, 2017 (UTGST Act)

- Integrated Goods and Services Tax Act, 2017 (IGST Act)
- GST (Compensation to States) Act, 2017

These acts are supplemented by numerous rules, notifications, and circulars issued by the GST Council and tax authorities, forming a comprehensive legal ecosystem for the application of GST to various goods and services.

## Relevance to District Cooling Plants

The application of GST to district cooling plants must be examined within this legal framework. Key considerations include:



**Classification of services** provided by district cooling plants.



**Treatment of goods** used in the construction and operation of these plants.



**Place of supply rules** for cooling services, especially in cases where the plant may serve areas across state boundaries and special economic zones.



**Input tax credit mechanisms** for capital goods and operational inputs.



**Specific exemptions or concessions** that may be applicable to the sector.

## 3. CLASSIFICATION OF DISTRICT COOLING SERVICES

District cooling plants offer a specialized service that involves centralized production and distribution of chilled water to multiple buildings within a defined area. This service, which includes the production, distribution, monitoring, and maintenance of cooling infrastructure, presents unique classification challenges under the current GST framework. The most closely related service category is “Transmission or distribution of electricity by an electricity transmission or distribution utility” (SAC 9969). However, this classification does not fully capture the value-added nature of district cooling services. A more suitable classification approach could involve creating a new sub-category within “Support services for electricity transmission and distribution” or establishing a distinct category for “Centralized Cooling and Heating Services” to better reflect the unique characteristics and benefits of district cooling systems.

### 3.1 NATURE OF SERVICES

District cooling plants provide a unique service that doesn't neatly fit into existing service categories under GST. The primary function involves the centralized production and distribution of chilled water or other cooling media to multiple buildings or facilities within a defined area.

This service encompasses:

- Production of chilled water using large-scale chillers
- Distribution of chilled water through an insulated pipeline network
- Monitoring and control of temperature and flow rates
- Maintenance of the entire cooling infrastructure

### 3.2 CURRENT CLASSIFICATION CHALLENGES

Under the present GST framework, the most closely related service category is “Transmission or distribution of electricity by an electricity transmission or distribution utility” (SAC 9969).

Key points supporting this classification:

- ⦿ The service is provided as a centralized utility infrastructure.
- ⦿ It involves distribution through a network, similar to other utilities.
- ⦿ The business model is utility-based rather than individual air conditioning service.
- ⦿ The service is provided on a continuous basis like other utilities (electricity, water, gas).

This classification, which encompasses “Electricity, gas, water and other distribution services,” establishes the fundamental taxation structure for district cooling operations. While the input electricity utilized in cooling systems maintains its GST-exempt status under Entry No. 104 of Notification No. 12/2017-Central Tax (Rate), the comprehensive cooling services provided through district cooling systems attract GST at 18%.

The taxable value determination under SAC 9969 encompasses multiple components that require careful consideration. The primary elements include consumption-based charges calculated on BTU/TR usage, fixed capacity charges that ensure system availability, network usage fees that cover distribution infrastructure costs, and various service charges related to maintenance and operations. Additional components, such as connection and disconnection fees, meter rental charges, and emergency service charges also fall within the taxable purview. This comprehensive pricing structure necessitates sophisticated billing mechanisms capable of appropriately segregating and calculating tax implications for each component.

However, this classification presents several issues:

1. District cooling plants do not directly distribute electricity but rather provide cooling services using electricity as an input.
2. The nature of the service is more akin to a value-added utility service rather than simple electricity distribution.
3. The environmental and energy efficiency benefits of district cooling are not recognized in this classification.

### Corroboration with city gas distribution services



The City Gas Distribution (CGD) services operate under SAC 9969, which specifically covers “Services incidental to energy distribution” including gas distribution services through mains. This classification reflects a sophisticated bifurcation in the tax treatment, where the basic gas distribution services remain outside the GST framework, maintaining continuity with the pre-GST regime and acknowledging natural gas’ essential utility status and strategic importance in the energy sector. The framework implements a nuanced approach where value-added services associated with gas distribution attract GST at 18%, encompassing supplementary offerings, such as connection charges, metering services, system maintenance fees, and last-mile connectivity charges. This creates a hybrid taxation model where the core commodity distribution remains tax-neutral while ancillary services contribute to the GST revenue stream.

This categorization under SAC 9969 accurately reflects the infrastructural and utility nature of gas distribution services through pipelines and mains, while providing a more appropriate framework for tax administration. The classification’s distinction between core gas distribution (non-GST) and supplementary services (GST at 18%) has significant implications for CGD operators in terms of compliance, pricing strategies, and business planning. Operators must carefully structure their billing and accounting systems to properly segregate GST-applicable components from non-GST elements, which influences the overall project economics of CGD networks as they factor in differential tax treatment when planning infrastructure investments and determining service charges. The model also establishes an important precedent for similar essential utility services’ tax treatment, particularly relevant when examining reforms for other utility distribution systems and aligns with international service classification standards.

### 3.3 PROPOSED CLASSIFICATION APPROACH

Given the unique characteristics of district cooling services, a more appropriate classification could be under a new sub-category within “Support services for electricity transmission and distribution” (SAC 9969). This would recognize the role of district cooling in enhancing energy efficiency and supporting sustainable urban infrastructure.

Alternatively, a new service category specifically for “Centralized Cooling and Heating Services” could be created to accurately reflect the nature of district cooling and similar technologies.

## 4. GST RATES AND IMPLICATIONS

The application of GST to district cooling services necessitates a thorough examination of current and proposed tax rates, as well as the broader implications for operators and recipients. Under the existing classification, district cooling services attract an 18% GST rate, which may not fully account for the energy-efficient benefits of these services. A proposal for a reduced rate structure aim to better align with the environmental advantages and operational efficiencies of district cooling. Additionally, the GST framework impacts input tax credits, compliance requirements, pricing strategies, and government revenue, highlighting the need for a nuanced approach to taxation in this sector.

### 4.1 CURRENT APPLICABLE RATES

Under the existing classification, if district cooling services are categorized under specific SAC Code of transmission and distribution, they would attract an 18% GST rate. However, this rate may not be appropriate given the energy-efficient nature of the service and its potential to reduce overall electricity consumption.

### 4.2 PROPOSED RATE STRUCTURE

Considering the unique position of district cooling services and their potential benefits, the following rate structure could be considered:

1. A reduced rate of 12% for standard district cooling services.
2. A further reduced rate of 5% for district cooling plants that meet certain energy efficiency benchmarks or utilize renewable energy sources.
3. Overall zero-rating for district cooling services or zero rating to specific sectors.

### 4.3 IMPLICATIONS OF GST APPLICATION

The application of GST to district cooling services would have several significant implications:

#### Input Tax Credit

District cooling plant operators would be eligible to claim input tax credit on the GST paid on goods and services used in the provision of cooling services. This would include:

- ⦿ GST on capital goods, such as chillers, pumps, and cooling towers
- ⦿ GST on maintenance services and spare parts
- ⦿ GST on chemicals, refrigerants, and other consumables

The availability of input tax credit would help in reducing the overall tax burden and potentially lower the cost of services.

Recipients of district cooling services, typically commercial establishments, industrial facilities, or residential complexes can avail Input Tax Credit (ITC) on the GST charged for these services, subject to the provisions outlined in Chapter V of the Central Goods and Services Tax Act, 2017. Additionally, the recipient must have received the services and the supplier must have actually paid the tax to the government. It is imperative that the recipient files their GST returns as mandated, as ITC can only be claimed on or before the due date of filing the return for the month of September following the end of the financial year to which such invoice pertains, or the date of filing the annual return, whichever is earlier.

For recipients providing both taxable and exempt supplies, such as mixed-use buildings with commercial and residential areas, the ITC must be apportioned as per Section 17 of the CGST Act and Rules 42 and 43 of the CGST Rules. Recipients must maintain meticulous records of the district cooling services received and their utilization in various business activities to facilitate accurate apportionment and substantiate ITC claims during assessments or audits.

## Compliance Requirements

In the realm of district cooling, operators must navigate a complex landscape of regulatory requirements to ensure compliance with the Goods and Services Tax (GST) framework. This involves a series of meticulous steps and adherence to specific guidelines designed to maintain transparency and accountability. Key compliance requirements include:



### Registration under GST

Depending on the scale and geographical spread of operations, operators may need to register either centrally or state-wise.



### Regular Filing of GST Returns

Timely and accurate filing of GST returns is crucial to avoid penalties and ensure smooth operations.



### Maintenance of Detailed Records

Keeping comprehensive records of input credits and output tax liabilities is essential for audit purposes and financial accuracy.



### Adherence to Invoicing and Documentation Requirements

Proper invoicing and documentation practices are mandatory to comply with GST regulations and facilitate seamless transactions.

## Pricing Impact

The introduction of the GST brings significant implications for the pricing strategies of district cooling services. As a comprehensive indirect tax levied on the supply of goods and services, GST affects various aspects of cost management and pricing. Operators must carefully consider how this tax will influence their overall pricing structure to remain competitive and financially viable. Key considerations include:

### ● Incorporation of GST into Pricing Strategy:

The GST component must be integrated into the pricing model to ensure compliance and accurate cost reflection.

### ● Reassessment of Competitive Pricing:

The relative cost-effectiveness of district cooling services compared to individual building cooling systems needs to be evaluated in light of GST.

### ● Renegotiation of Long-term Contracts:

Existing contracts with customers may require adjustments to account for the additional GST impact, ensuring fairness and transparency.

## Revenue for Government

Inclusion of district cooling services under the GST regime would provide an additional revenue stream for the government. This could be substantial given the growing adoption of district cooling in smart city projects and large-scale urban developments.

## Broad Overview of Goods Used in District Cooling Plants

Category	Component	HSN Code	GST Rate	Broad Usage Considerations
<b>Capital Goods</b>	Chillers	8,418	18%	Major cooling equipment
	Pumps	8,413	18%	Circulation systems
	Cooling Towers	8,419	18%	Heat rejection units
	Heat Exchangers	8,419	18%	Thermal transfer equipment
<b>Distribution Network</b>	Steel Insulated Pipes	7,304	18%	Primary distribution
	Plastic Insulated Pipes	3,917	12%	Alternative pipe material
	Valves and Fittings	8,481	18%	Flow control components
<b>Control Systems</b>	Control Panels & SCADA	8,537	18%	Automation systems
	Electrical Switchgear	8,536	18%	Power distribution
<b>Consumables</b>	Refrigerants	Varies	18–28%	Rate depends on environmental impact
	Water Treatment Chemicals	-	18%	Water quality maintenance
	Lubricants and Oils	-	18%	Equipment maintenance

## 5. ENVIRONMENTAL CONSIDERATIONS AND POLICY ALIGNMENT



### Energy Efficiency Goals

District cooling aligns with India's energy efficiency goals by potentially reducing overall electricity consumption for cooling. The GST framework should recognize and incentivize this alignment through:

- Lower GST rates for district cooling services that demonstrate high energy efficiency.
- Possibility of providing additional input tax credit for energy-efficient equipment used in these plants.
- GST exemptions or reductions for renewable energy sources used to power district cooling plants.



### Emissions Reduction

By centralizing cooling operations, district cooling can contribute to reduced greenhouse gas emissions. This environmental benefit could be recognized through:

- Preferential GST treatment for district cooling plants that achieve significant emissions reductions.
- Integration with any future carbon pricing or trading mechanisms under GST



## Urban Planning and Smart Cities

District cooling is often a key component of smart city initiatives. District cooling systems represent a fundamental transformation of urban resource management through a curated centralized cooling production and distribution.

The integration of district cooling with smart city infrastructure creates significant operational and environmental benefits. Advanced sensors and predictive analytics optimize cooling distribution based on real-time demand patterns, while thermal energy storage capabilities shift cooling production to off-peak hours, reducing strain on electrical grids. The centralized nature of these systems also enables more efficient water management through advanced treatment and recycling systems, while professional maintenance and optimal equipment selection result in higher overall system efficiency and reduced greenhouse gas emissions.

From an economic and urban planning perspective, district cooling catalyzes sustainable development by reducing upfront capital costs for businesses and enabling more flexible building design. Moreover, the planning and implementation of district cooling networks encourage integrated infrastructure development, influencing everything from building density patterns to mixed-use development strategies, ultimately contributing to more cohesive and sustainable urban environments.

District cooling networks can more readily incorporate new technologies and refrigerants compared to distributed systems, making cities more resilient to changing environmental standards. When designed with redundant systems and backup power, centralized cooling plants provide reliable service during extreme weather events or power outages, particularly crucial for critical facilities like hospitals and data centers.

GST policy for these plants should align with broader urban development goals:

- Special GST provisions for district cooling projects that are part of approved smart city plans.
- Simplified compliance procedures for integrated urban infrastructure projects, including district cooling.

## 6. INTERNATIONAL COMPARISON AND BEST PRACTICES

A robust and effective tax framework for district cooling systems represents a critical policy lever for seeking to advance sustainable urban infrastructure while addressing climate challenges. International approaches to taxation of these system vary considerably, reflecting different economic priorities, environmental commitments, and regulatory philosophies across jurisdictions. Examining these diverse tax treatments provides valuable insights into how fiscal policy can be optimally structured to balance revenue considerations with sustainability objectives the following international comparisons highlight key approaches that may inform India's evolving policy framework for district cooling systems.

### 6.1 GLOBAL GST/VAT TREATMENT OF DISTRICT COOLING

Examining the tax treatment of district cooling in other countries can provide valuable insights:

- **Singapore:** District cooling is subject to the standard GST rate of 7%, with full input tax credit available.
- In **Malaysia**, district cooling services (falling under green technology) are subjected to tax exemptions and investment tax allowance<sup>4</sup>, making it even more affordable for consumers. This tax exemption has helped to make district cooling more appealing to businesses and residential customers who are looking for sustainable cooling options.
- **United Arab Emirates:** VAT at 5% applies to district cooling services, with specific guidelines for mixed-use developments.

In the United Arab Emirates (UAE), the government has introduced reduced GST rates on district cooling services to make it more affordable for consumers and encourage investment in the industry. This has resulted in increased demand for district cooling in the UAE, which has led to the development of new cooling plants and expansion of existing ones. Reportedly, there has been significant surge of 54% in the usage of its district cooling services (measured in Refrigeration Ton hours-RTh) over the past five years.<sup>5</sup> The growth rate for the year 2023 alone was at 16%, which signifies a significant increase compared to the year 2022.

<sup>4</sup> Tax Incentives (pwc.com)

<sup>5</sup> Empower announces 54% increase in district cooling consumption - Utilities Middle East (utilities-me.com)

- ◉ **European Union:** VAT treatment varies by member state, but generally falls under standard rates with provisions for energy-efficient systems.

## 6.2 LESSONS FOR INDIA

Based on international practices, India could consider:

- ◉ Implementing a clear definition of district cooling services in GST law
- ◉ Providing specific guidance for mixed-use developments (commercial, residential, industrial)
- ◉ Offering VAT/GST incentives for highly-efficient systems, similar to some EU countries

## 7. KEY PERCEIVED CHALLENGES

The integration of district cooling systems into the GST architecture presents multiple systemic challenges that require coordinated regulatory intervention across taxation, environmental policy, and infrastructure domains. These structural challenges are further complicated by the multi-jurisdictional nature of district cooling infrastructure, requiring careful calibration of fiscal policies to avoid compromising the environmental and economic advantages these systems offer over conventional cooling solutions.

- ◉ **Classification and Regulatory Ambiguity:** The primary challenge lies in the absence of a specific service category for district cooling operations within the GST framework. Additionally, the regulatory overlap between GST provisions and energy efficiency standards creates additional compliance complexities for operators.
- ◉ **Rate Determination:** Applying an appropriate GST rate that reflects the nature of the service and its benefits.
- ◉ **Input Tax Credit Issues:** Ensuring full availability of input tax credit to prevent tax cascading.
- ◉ **Environmental Incentives:** Aligning GST treatment with environmental and energy efficiency goals.
- ◉ **Transition and Implementation:** Ensuring smooth transition for existing plants and ongoing projects.

## 8. RECOMMENDATIONS

The proposed policy interventions address critical taxonomic deficiencies in the current GST framework while introducing nuanced fiscal instruments designed to align taxation with sustainability objectives in centralized cooling infrastructure. The recommendations further integrate environmental externalities into physical architecture through innovative credit mechanisms and targeted exemptions while providing essential transitional provisions to ensure market stability during implementation.



### Classification Ambiguity

- ◉ Create a new service category for “Centralized Cooling Services.”
- ◉ Clear criteria for classifying hybrid cooling systems could be developed, along with specific provisions for emerging cooling technologies.



### Rate Determination

- ◉ Introduce a tiered rate structure based on energy efficiency and environmental impact.
- ◉ A special rate category for industrial applications could be created, considering their unique operational characteristics. The rate structure could also incorporate differential treatment based on environmental impact assessment.



### Environmental Incentives

- ◉ Introduce a ‘green credit’ mechanism under GST for plants meeting certain efficiency benchmarks.
- ◉ Provide GST exemptions for renewable energy components used in district cooling.



### Transition and Implementation

- ◉ Provide a transition period with grandfathering provisions for existing contracts.
- ◉ Offer clarifications and advance rulings to address industry-specific concerns.

## 9. SECTOR-SPECIFIC CONSIDERATIONS

The differentiated taxation framework addresses the complex multi-tiered contractual and operational structure of district cooling implementations across diverse property categories establishing distinct GST treatment protocols based on end-user classification and consumption patterns.



### Commercial Real Estate

- ◉ Impact of GST on service charges for tenants in commercial buildings
- ◉ Treatment of long-term cooling contracts in the context of GST



### Residential Complexes

- ◉ Implications for housing societies opting for district cooling
- ◉ GST impact on maintenance charges for residential customers



### Industrial Parks

- ◉ Special considerations for industrial cooling applications
- ◉ Potential for separate rate category for industrial district cooling

## 10. TECHNOLOGY AND INNOVATION ASPECTS

The proposed taxation framework establishes specialized GST provisions for advanced technological components integrating to the district cooling infrastructure, addressing classification challenges presented by hybrid energy systems and digital elements. The structure further implements targeted fiscal mechanisms designed to accelerate research investments through calibrated tax concessions.

### GST Treatment of Emerging Technologies

- ◉ Thermal energy storage systems and their classification under GST
- ◉ Treatment of AI and IoT components used in smart district cooling systems

### R&D Incentives

- ◉ Potential GST exemptions or concessions for R&D activities in district cooling
- ◉ Treatment of pilot projects and demonstration plants

## 11. IMPACT ANALYSIS, IMPLEMENTATION ROADMAP AND REGULATORY FRAMEWORK

There is a need for detailed analysis of the financial impact of different GST rates on district cooling projects and comparison of GST impact on district cooling versus conventional cooling systems. An assessment of the broader economic impact of promoting district cooling through favorable GST treatment can be done.

### Implementation Roadmap

The comprehensive roadmap outlines the strategic integration of goods and service tax regulations for district cooling infrastructure, balancing fiscal requirements with sustainability objectives. The framework establishes a progressive three-tiered implementation timeline designed to minimize market disruption while maximizing compliance and environmental benefits are robust stakeholder consultation mechanism ensures that technical complexities, industry concerns and environmental considerations are systematically addressed throughout the implementation process.

## Phased Approach

Proposal for a staged implementation of GST changes for district cooling:

1. **Short-term:** Clarification of existing rules and temporary measures
2. **Medium-term:** Introduction of specific provisions and rates
3. **Long-term:** Full integration with energy efficiency and environmental policies

## Stakeholder Engagement

- ⦿ Proposed structure for ongoing consultation with industry, environmental groups, and urban planners
- ⦿ Mechanism for regular review and adjustment of GST policies for district cooling.

## Legal and Regulatory Framework

The proposed legislative modifications establish a comprehensive regulatory foundation for the taxation of district cooling systems within the existing GST framework. These statutory amendments would assist to address critical definitional gaps in current tax legislations while creating provisions across central and state GST structures to ensure consistent compliance parameters.

## Amendments to GST Laws

- ⦿ Specific suggestions for amendments to CGST/SGST Acts to accommodate district cooling.
- ⦿ Proposed wording for new sections or clauses in GST law

## Interaction with Other Regulations

- ⦿ Analysis of how GST treatment interacts with energy efficiency regulations.
- ⦿ Coordination with urban development policies and smart city guidelines

## 12. CONCLUSION

The application of GST to district cooling plants in India presents a unique opportunity to align tax policy with energy efficiency and sustainable urban development goals. By addressing the technical and administrative challenges while providing appropriate incentives, India can create a supportive tax environment for the growth of district cooling.

By addressing classification challenges, proposing appropriate rate structures, considering environmental impacts, and learning from global best practices, India can develop a GST framework that not only provides clarity to the industry but also actively promotes the adoption of efficient and sustainable cooling solutions.

The proposed recommendations, including a phased implementation approach, sector-specific considerations, and a robust monitoring framework, offer a roadmap for policymakers to align GST treatment of district cooling with broader national objectives of energy efficiency, environmental sustainability, and smart urban development.

As India continues to grow and urbanize, the role of district cooling in shaping sustainable cities cannot be overstated. A well-crafted GST policy for this sector has the potential to drive innovation, attract investment, and contribute significantly to India's climate change mitigation efforts. Regular stakeholder engagement and periodic policy reviews will be crucial to ensure that the GST framework remains responsive to technological advancements and evolving urban needs.

By implementing these comprehensive recommendations, India can position itself as a leader in sustainable urban cooling solutions, setting a benchmark for other developing nations grappling with similar challenges of rapid urbanization and increasing energy demands.

Key actions required:

1. Clear classification and rate structure for district cooling services
2. Alignment of GST provisions with environmental and energy efficiency objectives
3. Simplified compliance mechanisms for the sector
4. Clear guidelines for interstate operations
5. Incentives for adoption of efficient and renewable-powered district cooling systems

In India, within the manufacturing industry<sup>6</sup>, GST is applied to all stages of production, from the initial raw materials to the finished product sold to customers. GST is imposed at each step of the manufacturing process to ensure that all parties involved are taxed accordingly. This involves taxation on the procurement of raw materials, components, and services used in production. Manufacturers then enhance the value of these inputs through production processes, and GST is levied based on this increased value.

Lowering GST rates, among other benefits from the tax structure, can serve as a strong financial incentive for suppliers. A major benefit of the GST structure to for the suppliers is the provision of Input Tax Credit (ITC)<sup>7</sup>. ITC is a mechanism under the GST system that allows businesses to reduce the tax they have paid on inputs (purchases) from the tax they need to pay on outputs (sales). Through this mechanism, manufacturers are eligible to receive credit for the GST already paid on the raw materials and services they procured. They can utilize this credit to offset the amount of GST they need to pay on the end product they sell. This mechanism is in place to prevent duplicated taxation and guarantee

that taxes are levied only on the value that is added during each phase of production, reducing costs to the seller.

Reduction of GST rates can encourage more businesses to invest and participate. When the GST rate is reduced, the cost of district cooling services decreases. This makes it more attractive for consumers to adopt district cooling instead of using their own cooling systems. This, in turn, leads to increased demand for district cooling, which can encourage more companies to invest in its development. A lower GST rate can also encourage businesses that operate in the cooling industry to transition to renewable energy sources for their cooling plants.

Implementing these recommendations would not only provide clarity to the industry but also support India's broader goals of energy efficiency, emission reduction, and sustainable urban development. The GST framework for district cooling plants can serve as a model for how tax policy can be leveraged to promote innovative and sustainable infrastructure solutions.

<sup>6</sup>How Does GST Impact Manufacturers - CaptainBiz blogs

<sup>7</sup>What is Input Tax Credit under GST and How to claim it? (cleartax.in)

## Imprint

This policy brief was researched in the framework of Gesellschaft für Internationale Zusammenarbeit (GIZ)'s 'Energy Efficiency Cooling' programme, jointly implemented with the Bureau of Energy Efficiency (BEE), Ministry of Power, and funded by the German Federal Ministry for Economic Affairs and Climate Action (BMWK) as part of the International Climate Initiative (IKI), to accelerate adoption of sustainable cooling practices.

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