



Simplify Billing Complexities

Through An Advanced Tower Billing Solution



www.infozech.com

2023

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As the Tower industry continues to grow and evolve, revenue assurance has become a critical issue. A good billing system can help companies to accurately capture and bill for the services they provide, while also improving efficiency and customer satisfaction.

From accurate and timely billing to managing energy usage and sustainability goals, a good billing system can play a crucial role in driving business success.

With a keen focus on an easy-to-use and configurable platform, Infozech has an impressive record of deploying IoT and telecom site management solutions for various telecom infrastructure companies and operators across the globe.

This whitepaper from Infozech explores challenges that a tower company faces in billing, what is at stake in absence of a reliable billing system, the capabilities required, and what remarkable benefits a scalable and stable Billing solutions can deliver. It also introduces an IP and energy billing module which is being used by leading towercos to generate accurate bills and plug in revenue leakages.

Why is billing accurately so important for towercos?

Billing is a critical revenue system! Billing inaccuracies have a direct impact on revenue and customer satisfaction.

If there is an overbilling, it leads to disputes impacting CSAT, and eventually, huge numbers of man-hours and working capital are spent to clarify and resolve such mismatches. During this process, payment remains stuck impacting cash flows and putting your client retention at risk

If there is an underbilling, there is not just a loss of significant revenue but also of working capital in case energy is a pass-through, where a tower company has paid higher to the vendor than what it charged to a telco, In some cases, these leakages are identified and billed in a retro manner later on- but the delay in recognising and materialising leaves a huge impact



The issues and disputes related to over and under billing are recurring in nature leading to frustration and loss of trust, mainly because of the lack of an integrated system that identifies and corrects input data at the source level.

Factors that make billing accurately difficult

With rapid changes like the evolution of technologies(5G,4G), fierce competition, M&As, etc - billing scenarios between Towercos and Tenant MNOs are evolving faster than ever before and becoming more complex. The quantum of data processed for it is so high that billing automation is now indispensable to bill accurately to manage revenues. In a workflow system with high configurability, database integrity is compromised and bills generated are not accurate, which leads to revenue leakages impacting profitability.

- Energy bills as a total may be small in revenue compared to rental, but are highly complex and the cause of most of the billing disputes: Lack of accurate and reliable consumption data is the key reason that most of the billing systems are not able to validate the consumption data to build more accuracy (Figure 1).
- It is hard to transfer logic from MSAs/MLAs and update the price book from it : Pricebook is not getting completely captured, Billing is done on 90% of parameters mostly - Parameters like tenancy and tower type contribute to 90% and parameters like Antenna height, Floor space, region etc. contributes 10% - These 10% parameters are missed (Figure 2)
- Low System flexibility and configurability to handle rapid changes in MSA/MLA : Workflows are hard coded and require a significant amount of time for reconfiguration.





Figure 1 : Key parameters for Energy billing

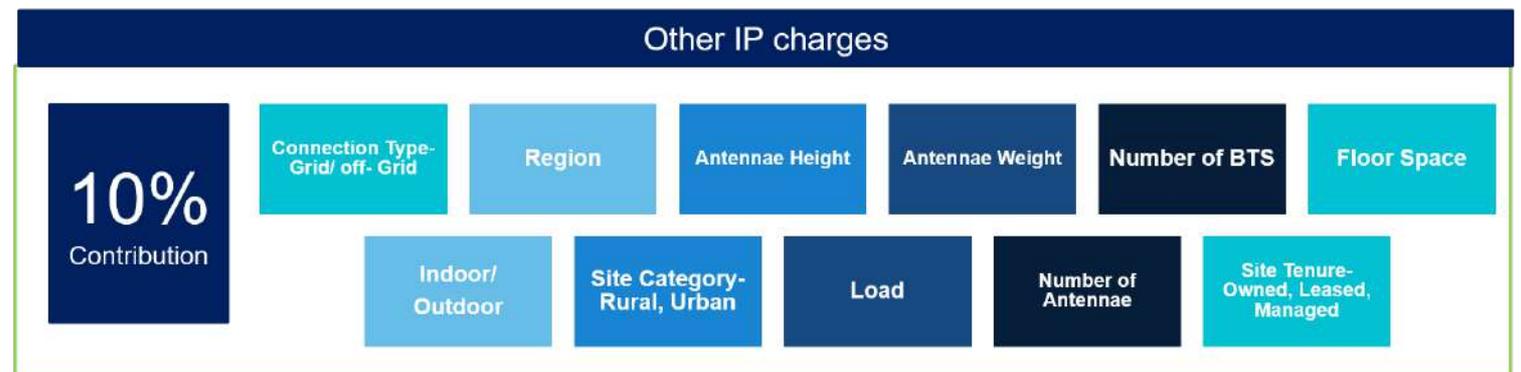
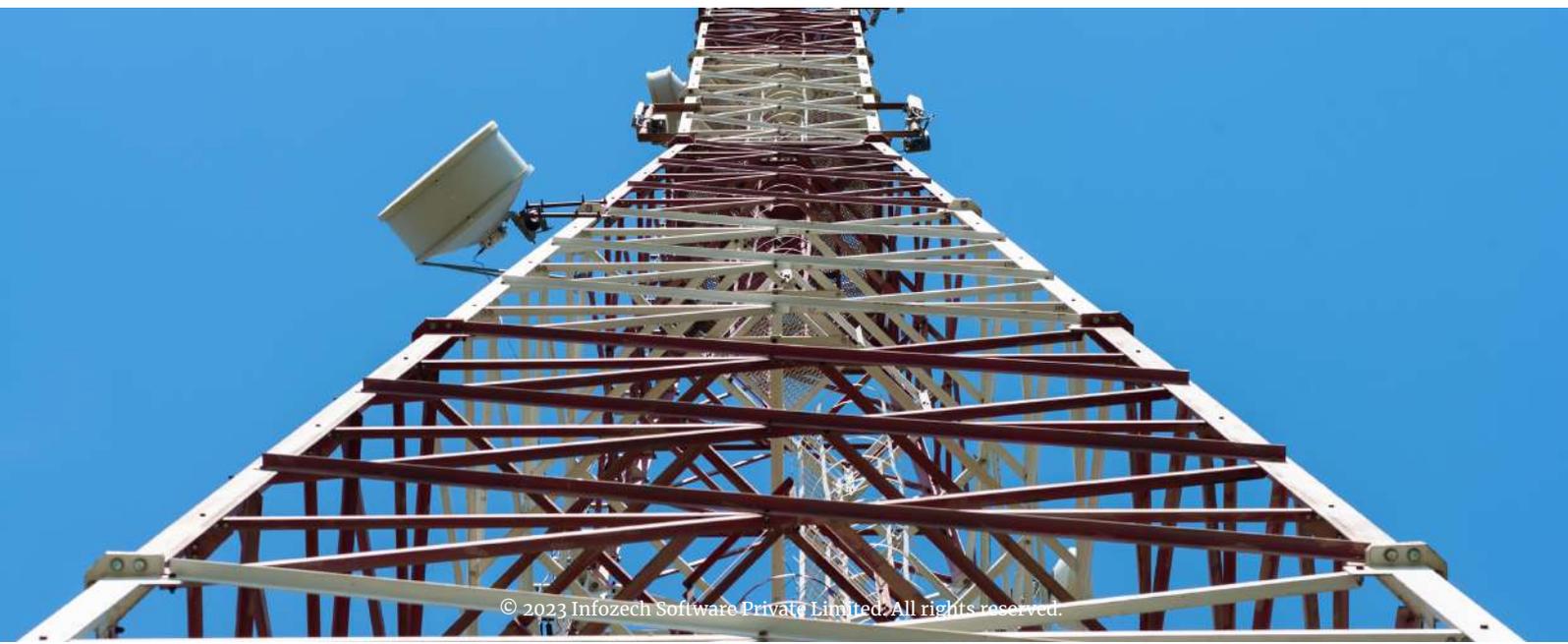


Figure 2 : Key IP charges



Finance teams can operate better, chase outstanding sums more accurately and speed up reconciliation

A good billing solution provider should help in all three areas:

- automate end to end business processes to reduce billing generation cycle,
- provide a team of Towerco billing experts, who understand, capture and configure all parameters in MSA so that billing is done on all MSA parameters without a miss,
- build billable data accuracy with justification through all relevant data points, so that there is no dispute and delay in payment.

🔍 Finance KPI -Tower billing ×

Finance team has some important KRAs with respect to billing

1. Billing on time,
2. Bill customers on all parameters while ensuring each contract is recognized fully and meets with regulatory and auditory requirements
3. Ensure there is no stuck cash flow.

An ideal billing solution ensures that each site and asset on site is being billed. If any site or asset on site is missed due to any ongoing dispute or issue got identified at later date, then solution should keep highlighting it to stakeholders and allow them to Retro bill for past unbilled period to ensure there is no revenue leakage.

Such solution should also capture an error database, which can be used to reconcile before bill generation every month to avoid wrong billing and unnecessary disputes. With all these factors, management will be able to maintain sustainable margins for at least 95% of the sites.

With all validated data being at single place and stringent checks, an accurate bill can be generated and finance can better assess their position because of better visibility of revenue. Bill reports should provide deep insights about the financial-health of sites.

Elements of M&A deals, or agreed MLAs leads to friction between tenants and towercos

Large REITs, asset management firms are increasing their investments in the telecom tower industry, driving consolidation by acquiring smaller tower owners to fuel their growth plans. Such amalgamation by M&A complicates the existing billing process. When a new portfolio comes in, commercial factors like pricing (discounts, premiums), multiple currencies, and energy models (fixed or pass-through) disturb the existing billing setup.

Since the contracts between the towerco and the operator on the old portfolio are often on a different plan than the newly acquired sites. It takes a lot of work to harmonize the pricing, if they do decide to bring it up, else there will be multiple pricing across sites, based on what was negotiated and the original contract.

So, new portfolio brings new MSAs and MLAs, further increasing the complexity of the billing.



Better billing mechanism, happy operations teams

A good billing solution does data validation and exception handling, which helps build accuracy in billing, leading to minimization of disputes. One that does billing on all the parameters, which further minimize revenue leakage. It maintains the audit and historical data. It brings in high confidence in data & versioning of data for customer facing account managers. Historic data if maintained with month wise values of IP as well energy parameters can be used as reference for dispute resolution meetings making them more transparent and resolving disputes faster.

All of this leads to significant reduction in the effort of the billing and operational team. The better acceptance of the bills by the telcos also build deeper customer relationships based on trust hence improving CSAT



As a tech solution provider, we have seen that there are a lot of disputes between towerco and telco because of an inaccurate bill, the core reason of it is data inaccuracy. Resolution of disputes takes a lot of time and effort of operation teams.

Infozech's iBill platform helps you to automate your end to end billing process for all the services towercos provide to Telcos - Space, Energy as well as fiber.

PaaS (Power as a service)

When billing telecom companies for Power-as-a-Service (PaaS), tower companies may face a number of issues. Some of them being:

- **Accurate measurement of energy consumption:** Accurately measuring the energy consumption of telecom equipment can be challenging, especially when different types of equipment have different energy consumption patterns. Tower companies need to ensure that their billing systems can accurately measure energy consumption and charge customers based on actual usage.
- **Billing complexity:** when there are multiple parties involved in providing and managing the energy supply, PaaS billing could get complex. Tower companies need to ensure that their billing systems can handle complex billing structures, and that they can accurately allocate costs to different parties involved in providing PaaS.
- **Managing peak demand:** Telecom equipment often experiences peak demand at specific times, such as during periods of high traffic or when multiple devices are connected simultaneously. Tower companies need to ensure that their energy supply can meet these peak demands, while also ensuring that they can accurately bill customers for their usage during these periods.
- **Energy price volatility:** Energy prices can be volatile, and tower companies need to ensure that their billing systems can handle changes in energy prices and adjust billing accordingly. They may also need to consider offering different pricing plans or contracts to help customers manage their energy costs.
- **Disputes and disagreements:** Disputes and disagreements over billing can be common when providing PaaS. Tower companies need to have systems in place to manage disputes, such as providing accurate usage data and detailed billing information to help resolve any issues.

Overall, billing for PaaS can be challenging, but by ensuring accurate measurement of energy consumption, handling billing complexity, managing peak demand, handling energy price volatility, and managing disputes, tower companies can ensure that their PaaS offerings are financially sustainable and meet the needs of their telecom customers.

A point to highlight as well is, with the rising costs of diesel many operators are imposing generator run caps on the TowerCo/PaaS partners as the cost is higher than making use of Grid, Hybrid systems and of course the targets they have set for reducing carbon emissions. In these cases of DG capping, the TowerCo can lose heavily on his revenue in both MLA types, being

- PaaS Actual consumption – Will not be able to bill the agreed average energy consumed if exceeded the generator run hour cap.
- PaaS or TowerCo pass-through cost – TowerCo will not be able to bill the customer for the actual fuel costs if generator running exceeded the daily cap.

Better billing enables better total energy management

An ideal billing solution enables and empowers billing owners to manage the very core of billing- which is data curation. An ideal solution should integrate with power systems to get the energy consumption data as well as updated site & asset information for billing and sanitize and validate it. It should get load, consumption data and through validation rules – identify the exception sites. In case of Missing values – an intelligent billing system can take an average based on historical data .

With better billing based on accurate energy data, a tower company can see a comparative analysis of its power consumption on similar sites and start optimising

By improving energy management practices, telecom tower companies can also reduce their environmental footprint and enhance their reputation as responsible corporate citizens. This can lead to increased customer loyalty and positive brand recognition, which can ultimately drive business growth and profitability.

Role of Billing towards reducing carbon emissions across scopes 1,2 &3 of the GHG Protocol

As COP27 last year brought further commitments to sustainability targets:

The Greenhouse Gas Protocol (GHG Protocol) is one of the most widely used emissions reporting standards for businesses. GHG Protocol requires companies to break down their emissions into three categories or scopes:

- **Scope 1 emissions:** Scope 1 emissions refer to direct emissions from sources that are owned or controlled by the company, such as diesel generators used to power telecom towers. Billing can help reduce Scope 1 emissions by providing accurate data on energy usage and costs across multiple similar sites, which can help towercos and MNOs identify areas where energy efficiency improvements can be made, such as upgrading to more efficient equipment or switching to renewable energy sources.
- **Scope 2 emissions:** Scope 2 emissions refer to indirect emissions from the generation of purchased electricity, heat, or steam. Billing can help reduce Scope 2 emissions by providing data on the electricity consumption of telecom towers, which can help identify opportunities for energy efficiency improvements, such as switching to more efficient equipment or using renewable energy sources. Additionally, billing can help towercos and MNOs negotiate with their energy suppliers for renewable energy contracts or green tariffs, which can help reduce Scope 2 emissions.
- **Scope 3 emissions:** Scope 3 emissions refer to indirect emissions that are not owned or controlled by the company, such as emissions from the production of materials used in telecom tower construction or emissions from the use of telecom services by end-users. Billing can help reduce Scope 3 emissions by providing data on the energy consumption of telecom services, which can help identify

opportunities for energy efficiency improvements. Additionally, billing can help towercos and MNOs develop billing practices that incentivize end-users to reduce their energy consumption, such as offering energy-efficient devices or providing billing information that highlights energy-efficient usage habits.

So the billing solution plays a major role in reporting on the energy emissions reductions, due to receiving the following data inputs:

- *Energy management system supplies data on all power sources utilised to supply each tenant with power in the month*
- *Maintenance management system provides the data on all site maintenance activities which includes the site visit travelling*
- *Asset management system provides all the data for the movement of assets, tower corrective or planned upgrades due to the customer requests.*
- *MLA inputs which were agreed by Operator and TowerCo (Contract terms for emission reduction)*

Therefore the billing solution must take all the above into account in order to report on.



An intelligent billing solution pulls its data from the Energy Management System as we have multiple power sources with separate reporting and units of measure for billing. A good TowerCo business model weighs heavily on multiple tenancies, and each may have in their MLA's different sustainability targets, set by each customer and these are then reported on separately.

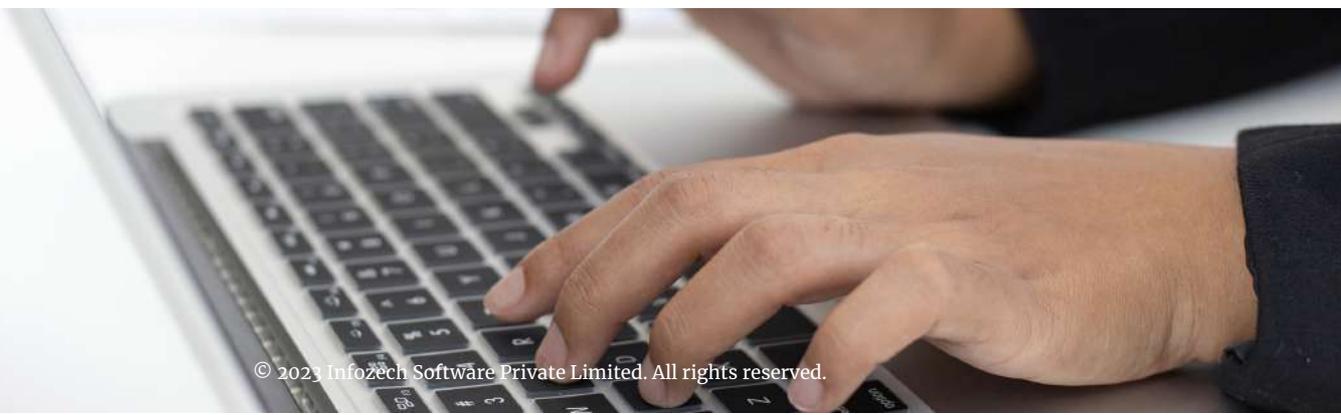
iBill - Infozech's billing solution

Tower Billing solution for for IP/Space & Energy billing

In Tower billing, the major 2 categories of billing are done - Rental Billing and Energy Billing. Besides we are starting to see a 3rd area - of fiber as the industry moves to greater fiber adoption.

Based on our experience in the Industry and working with multiple customer in multiple geographies - we have been seeing challenges mentioned in the beginning of this paper and below are ways how we can bring value

- Infozech iBill is more configurable, scalable and is an integrated solution which can handle multiple billing processes for tower billing – Rental, Energy, and Fiber.
- For Billing accuracy and Revenue Assurance
 - With respect to Tenant Billing - Infozech Solution will help configure all the billable parameters and help in billing accuracy which further leads to revenue assurance.
 - For Energy Billing – Solution get Load, Consumption data and through validation rules – identify the exception sites. In case of Missing values – system either takes average based on historical data or you can manually override to make data billable.
- Further on configurability and Flexibility
 - All Contracts, MLA/MSAs can be configured from front end
 - Infozech can integrate with power systems to get the energy consumption data for billing
 - Solution helps analyse and report on the historical data to handle disputes within the defined TAT



iBill - Infozech's billing solution - benefits customers are getting

Tower Billing solution for for IP/Space & Energy billing





Infozech's iBill

• SCALABLE • RELIABLE • FLEXIBLE • FASTER

More Self Service **Upto 70% Configurable** - All Contracts, MLA/MSAs can be configured from front end

More Scalable - Generating bills for **250,000** sites in single instance

Supports Multi Product - Power & Fuel, Rental, Fiber **Increase CSAT**- reduced disputes

Financial Payback- **increased Revenue Assurance** through improved billing accuracy



MENA Tower Industry

With focus on digital transformation, will improved billing help Towercos manage increasingly dense networks of small cells, DAS and IBS for 5G low latency coverage?

With the deployment of 5G networks, the number of small cells, DAS, and IBS required to provide coverage is likely to increase significantly. Improved billing processes can help towercos manage these networks more efficiently by generating bills for the numerous sites, accurately and on time.

Improved billing systems can help towercos ensure that they are accurately billing customers for their use of the network. This is particularly important for 5G networks, which are likely to have complex pricing structures based on factors such as usage, speed, and latency.

Infozech's dynamic ratings pricing engine (which some customers refer as "brain") maintains rate and price matrices independent of site tenancies and contracts. This empowers customers with the agility to add new site tenancies or make changes (like upgrades) at will.

This also gives tower operators the necessary ammunition to ensure that the investment in new technology is being monetized through accurate billing and timely collections. It also gives them the ability to devise dynamic charge plans and update bill plans from time to time. The accelerators on these plans need not be valid for 10-15 years and can be changed.



Improved billing systems can help towercos manage increasingly dense networks of small cells, DAS, and IBS for 5G low latency coverage by streamlining billing processes, providing accurate and real-time billing, and enabling data analysis for improved network performance and profitability.



Infozech is an IT solution partner serving large Tower Companies and large Telecommunication Operators embedded with its deep domain understanding of telecom – tower infrastructure business and ability to understand the client’s business processes and convert them into efficient workflows for automation. We do this with our proven Software Modules, customization capabilities, services and consultancy, in the Tower Domain business.

We enable operators of telecom-towers infrastructure to improve their financial performance and enhance their end-customer experience. We do this by optimizing and reducing the cost of operations and maintenance, energy and business processes. We utilize our deep understanding of their current and future needs and satisfy them based on our profound expertise of the infrastructure, customizable modules of our module suite and integrate them with embedded IT systems and hardware. By accelerating information flow, we provide meaningful insights for smart, actionable decisions. We deliver business solutions, specific to customer’s core business functions using latest technologies, library of validated domain specific system/modules, operational procedures and process flows. We help improve telecom and tower companies’ responsiveness, agility and ability to a faster turn around to their stakeholders , building enduring relationships based on trust.

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