For example, We would have to input processing and storage requirements -

X requests per second made to server
Average time for each request - 1ms
50Tb of data

Then we would simulate the building of a server to facilitate this input using industry standard figures - (reference - https://medium.com/geekculture/how-to-calculate-server-max-requests-per-second-38a39bb96a85)

Number of cores required = RPS * task duration

Industry standard is a 42U rack, where each server is a 1U box with- (Ref- https://www.computerworld.com/article/2583561/server-size-matters.html#:~:text=Standard%20data%20center%20racks%20are,theoretically%20can%20hold%2014%20servers.)

1-2 Processors
Upto 4Gb RAM
Upto 20 Hard-drives

If we consider the industry standard of Intel Xeon processors-

8-28 Cores per chip. 2 processors per server, and 42 servers per rack-> roughly 7600 - 1000 cores per rack.

Modern High-end data centres aim to maintain a good storage-to-server metric. This is the ratio of storage capacity to CPU cores per rack. We ideally want to maintain a 4 s/s ratio. (ref- https://blog.seagate.com/intelligent/data-center-rack-density-is-more-important-than-you-might-know/)

Hence using our number of cores per rack, our storage per rack is -

Number of cores per rack * 4 = Storage capacity per rack

We now know roughly how many racks a company will need to service them. We can now calculate energy requirements - (refer to this paper- https://www.racksolutions.com/news/blog/server-rack-power-consumption-calculator/)

AUS standard VAC - 230/240V
Full rack of 1U power supply = 2500W

Industry servers are rarely utilised at 100%, hence we can estimate the power draw at a particular usage level-

$$P_n = (P_{max} - P_{idle}) * (n/100)+P_{idle}$$

In our case average max power supply is 240 W and idle power supply is 200W. AWS estimates that only 15% server utilization occurs at any one time in a regular in-house server-

Hence, use = (240 - 200) *(0.15) + 240
= 206W
206 W * 24h = 4944 Wh / server
4.944 kWh per server

4.944 kWh * number of servers * number of racks = total power draw of facility.

Required floorspace for facility >= (Volume of one industry standard 42U rack) * number of racks

Thus, to estimate carbon footprint for purely just running the servers ->

Average $CO_2$ emissions per kWh = 656.4 grams in Australia.
Energy production in NSW in 2019 = 73,532 GWH (source)
$CO_2$ output in NSW in 2019 = 52 metric tons

$CO_2$ emissions per kWh in NSW = still have to find source.

Thus, using this method we can find-

Number of server racks required to service client
Amount of floor space required to set-up server
Amount of power utilised in normal running of server (cooling not included yet)
Amount of $CO_2$ emissions for the running of server (cooling not included yet)