Digital Economy & Carbon Market

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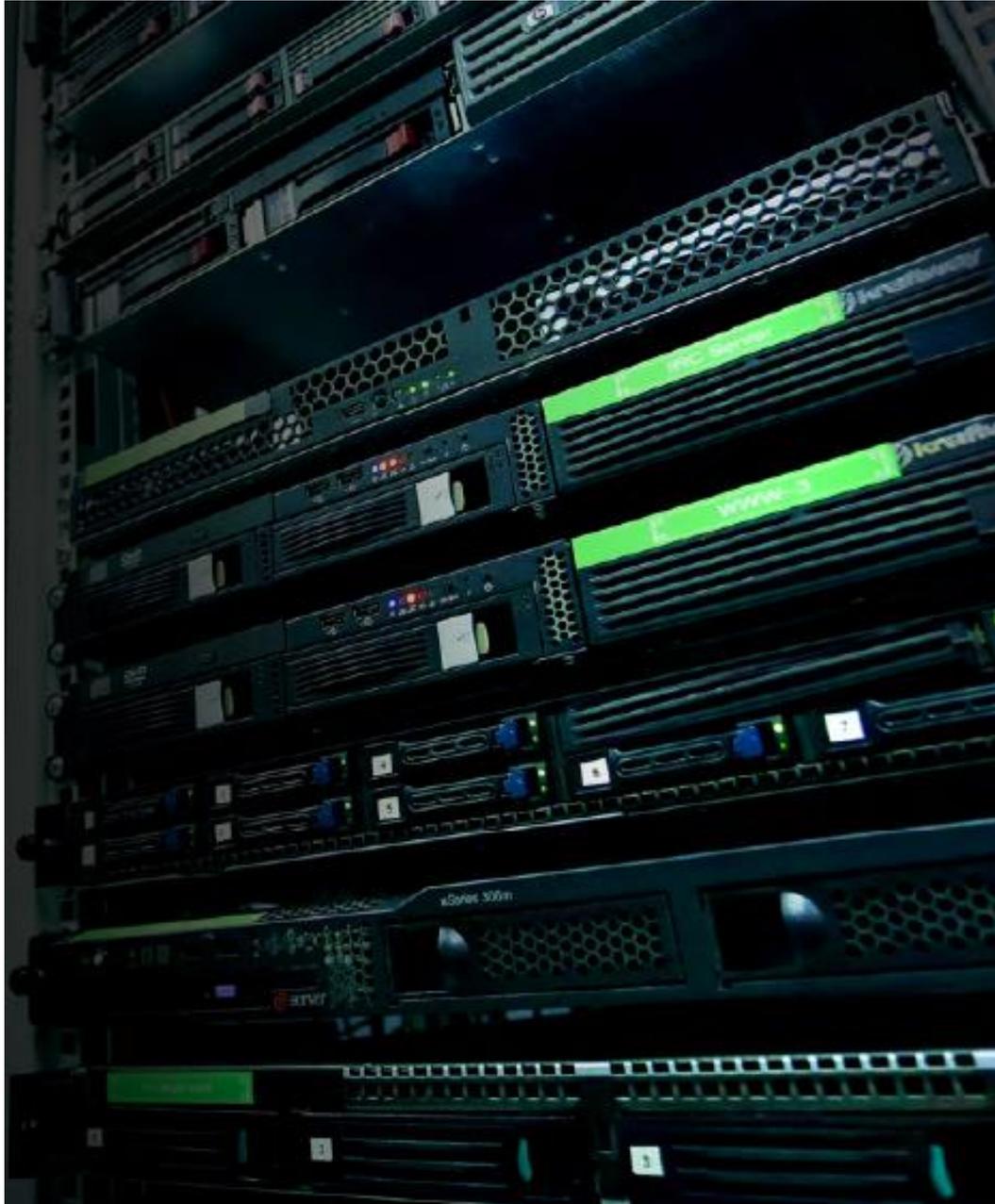
In 2020, the overall IT sector represents between 5 and 15 percent of global electricity consumption, depending on the external forecast available. This is due – again – to scope differences and modelling specificities.

Schneider Electric's own model estimates current global IT-related electricity demand to account for 1,900TWh, or 8 percent of total electricity demand. This is globally consistent with the research from Andrae in 2020[7] at 1,700TWh and that from the International Energy Agency 2017 report forecast[8], at 1,400TWh, when accounting for scope differences.

Global Electricity generation	2015	2020	2023	2030
Electricity generation (TWh)	21,229	24,644	26,382	30,718
Share of IT sector vs total electricity demand	9.3%	8.7%	9.3%	11.5%

Carbon emissions (MtCO$_2$/y)	2015	2020	2023	2030	2030 decarbonized
Global Electricity CO$_2$ intensity (gCO$_2$/kWh)	548	494	458	378	378
- Compute	49	56	69	125	63
- Storage	9	9	17	41	20
- DC infrastructures	98	103	111	106	53
- Fixed networks	54	79	97	90	45
- Mobile networks	46	43	62	155	77
- IT devices use	107	88	78	54	54
- Network equipment use	46	58	65	87	43
- IoT devices use	16	35	45	110	110
- TVs and peripherals use	272	225	198	146	146
- Device manufacturing	279	260	264	287	287
Total	976	955	1,006	1,201	899
Share of global energy-related emissions	3.1%	2.8%	3.0%	3.4%	2.6%

China's national carbon trading

Climate Goal	China aims to have CO_2 emissions peak before 2030 and achieve carbon neutrality before 2060.
Compliance Period	2019-2020 is the first compliance period that requires all covered entities to fulfill their compliance by the end of 2021
Covered GHGs	Carbon Dioxide (CO_2)
Covered Industries for data reporting	Power Generation, Petrochemical and Chemical, Building Materials, Iron and Steels, Nonferrous Metals, Papermaking, and Aviation
Covered Industries for Emissions Trading and Compliance	Power Generation Industry
Covered Key Emitting Entities	2,162 key emission power generation entities
Thresholds	The key emitting entities emitted 26,000 tonnes of carbon dioxide equivalent and above in any year from 2013 to 2020
Carbon Price (Listed Transaction)	From July 16th to August 11th, the lowest price was $7.4 US (￥48 Chinese Yuan), and the highest price was $9.42 (￥61.07).
Allowances Allocation	Free Allocation based on the Allowance Allocation Implementation Plan
Price Control	The price of listed transaction shall be between ± 10% of the closing price of the previous trading day. The price block trade shall be between ± 30% of the closing price of the previous trading day.
Offset Mechanism	According to Measures for the Administration of National Carbon Emissions Trading (Trial), key emitting entities may use China Certified Emission Reductions (CCERs) to offset up to 5% of their annual carbon emission allowances that should be surrendered.
Penalties	The national level Regulations on the Administration of Carbon Emission Trading is still under review. According to Measures for the Administration of National Carbon Emissions Trading (Trial), key emitting entities make false reports will be subject to a fine of more than ￥ 10,000 but less than ￥ 30,000. The key emitting entities that fail to surrender carbon emission allowances will be subject to a fine of more than 20,000 yuan but less than 30,000 yuan and will be allocated the emission allowances for the next year that deducted the amount equivalent to allowances not surrendered.

MOBILIZING VOLUNTARY CARBON MARKETS

GROUP DISCUSSION

ADDITIONALITY
- MORE CONSERVATIVE PERFORMANCE STANDARDS / ELIGIBILITY CRITERIA FOR STANDARDIZED METHODS, UPDATED IN LINE WITH NDC CYCLES

ALIGN CREDITING PERIODS WITH NDC CYCLES
BASELINES
- USE CONSERVATIVE, BELOW BAU BASELINES

CONSIDERING VOLUNTARY CREDIT QUALITY IN THE POST 2020 CONTEXT

- PROVIDE GUIDANCE TO CARBON CREDIT BUYERS
- VALIDATED DETAILED CRITERIA
- ROBUST METHODOLOGY
- APPLICATION OF RATINGS TO CARBON CREDIT PROJECTS

CRITERIA
- ADDITIONAL NOT OVER ESTIMATED
- PERMANENT NOT DOUBLE COUNTED
- NO ENVIRONMENTAL / SOCIAL HARM
- PUBLICATION OF A REPORT

LEAKAGE MAINTAIN CURRENT PRACTICES
PERMANENCE MAINTAIN CURRENT PRACTICES
AVOIDING HARMS MAINTAIN CURRENT PRACTICES

POTENTIAL IMPLICATIONS OF PARIS & NDC IMPLEMENTATION FOR VOLUNTARY MARKET QUALITY

- WE SHOULDN'T PUT UP ANY ARTIFICIAL BARRIER
- WE NEED INVESTMENT — NOT WALLS

PARIS MOVING TOWARDS GLOBAL AMBITION
BASELINES → ADDITIONAL BEYOND THE POLICY

MOVING TOWARDS NET ZERO
HOST PARTIES: WHAT ACTIVITIES TO APPROVE?

HUGE CHANGE IN THE LEVEL OF AMBITION

MOVE AWAY FROM PREDETERMINED BASELINES

COUNTRY SPECIFIC, WE CAN'T DECARBONISE ALL COUNTRIES NOW

CARBON MARKETS ARE SUPPOSED TO HELP COUNTRIES ACHIEVE THEIR NDCS

WHAT ARE COUNTRIES PLEDGING TO DO?

1.5 CEILING — COP'S GOALS
"DOUBLE COUNTING STILL IN DEBATE AFTER 2020" — SAYS CORSIA

CORRESPONDING ADJUSTMENTS

ADDITIONALITY HOW DO WE DEFINE IT SUCCINTLY?
- CAN YOU ANTICIPATE IMPLEMENTATION?
- WORKING WITH GOVERNMENTS IS KEY
- CAN WE PROVE IT AS IT'S DEFINED?

REGULATORY ADDITIONALITY: STANDARDS LOOKING AT IT ALREADY
- PERFORMANCE-BASED
- EVERYTHING REQUIRES DOCUMENTATION
- IN THE FUTURE, WHAT WILL BE REQUIRED?

DO YOU BELIEVE ALL STANDARDS APPROACH ADDITIONALITY IN A COMMON WAY?

YES, SIMILAR APPROACHES WITH SOME DISTINCTION
AND: ARE WE GOING TO STAY THE SAME IN THE FUTURE?

POST 2020 CONTEXT
- WHAT TRANSITION STRUCTURE CAN HELP INTO PM AND SUPPORT?
- HOW DO WE EMPOWER THE PRIVATE SECTOR TO ACT?
- A GREAT OPPORTUNITY ALSO FOR GOVERNMENTS

WORKING TOGETHER TO ACCELERATE
- WE SHOULD FOCUS ON THE PRIVATE SECTOR
- WHAT THE IDEAL SCENARIO LOOKS LIKE FOR US?

DISCUSSION WITH THE STANDARDS ON CORE QUALITY CONSIDERATIONS: PAST, PRESENT AND FUTURE

MAINTAINING QUALITY OFFSETS (VERRA)
STANDARDS ARE ESSENTIAL TO MAINTAIN THE QUALITY PARAMETERS

HOW DO WE TAKE DECISIONS? WE POST EVERY COMMENT ONLINE (A TRANSPARENT TOOL)

REGISTRIES & PASTORAL DEVELOPMENT
- STRIVING TO MAXIMISE PUBLIC INVOLVEMENT
- NOTHING BEHIND CLOSED DOORS
- MAXIMISE SCALABILITY
- ELIMINATE UNCERTAINTY
- MAKE THE PROJECT HAPPEN

PERMANENCE & REVERSAL
WE MANAGE RISK OF REVERSAL (UNINTENTIONAL OR INTENTIONAL)
- OFFSETS CAN BE WITHHELD
- PROJECT PROPONENT CAN DEPOSIT OTHER CO-OFFSETS
- CONTRIBUTION TO THE BUFFER POOL

EVOLUTION OVER TIME
- INNOVATION, SCIENTIFIC THINKING
- TRANSPARENCY BEYOND STANDARDS
- LABELS FOR CORSIA
- BASELINE & ADDITIONALITY

MORE THAN JUST CARBON

GOLD STANDARD FOCUS ON 4 AREAS OF SUST. DEVELOPMENT
- AND ON HIGH DEVELOPMENT POTENTIAL ACTIVITIES

STAKEHOLDER INCLUSIVITY
- SDG IMPACT REPORTING
- SAFE GUARDING
- ACCESS PROVISION
- UNITS & LABELS CONSISTENT WHEREVER APPLIED
- MARKET USE CASES

A CONSERVATIVE APPROACH COULD BE HARMFUL
ACCURACY IS THE REAL GOAL

TRANSPARENCY & GOVERNANCE
- WE SHOULD LOOK AT BENEFIT SHARING OR TAXES ON TOP OF KEEPING METHODOLOGIES AND ACCOUNTING FOCUSING ON ACCURACY
- WHAT'S THE RIGHT APPROVAL FOR THE VOLUNTARY MARKET?

VOLUNTARY / **COMPLIANCE** / **MARKETS**
UNCLEAR BOUNDARIES TODAY

EDF ENVIRONMENTAL DEFENSE FUND

- *Three building blocks :*

- High-quality, reliable, and comparable data
  - ✓ *Block Chain*

- Harmonized and consistent set of climate disclosure standards
  - ✓ *Sector Specific, what should digital players do*

- Broadly agreed-upon global taxonomy
  - ✓ *Publicity and Communication*