Economic & Financial Incentives – Green Finance

The ESCAP Second Regional Workshop
World Green Organisation (WGO)

- Founded in 2012
- Non-profit making organisation
- 33 full-time staff
- Charitable Institution under section 88 (No.91/12832)
- Office Address: Green House, 4th Floor, 483 D-E, Castle Peak Road, Lai Chi Kok
- Green Sharing Economy Centre (Retail outlet): 88 Cheung Sha Wan Road
WGO Sustainable Business Alliance
Green Office Scheme

400 offices/corporation participated in WGO'S

WGO Green Office Award Labelling Scheme (GOALS)
WGO Green Office Award Labelling Scheme (GOALS)

400 offices/corporation participated in WGO’s Green Office Scheme
WGO Green Office Award Labelling Scheme (GOALS)

400 offices/corporation participated in WGO’s Green Office Scheme
Dr. William Yu

- Deputy Chairman, Final Judging Panel, Smart Living Award
- Assessor Chair, Smart Healthcare Stream, The Hong Kong ICT Awards, OGCIO, HK SAR Government
- Chairman, Judging Panel, BDO ESG Awards
- Over 11 years of business management experience in Bank, US Multi-national corporations
- Independent Non-executive Director (INED) of Amasse Capital (Stock no. 8168)
- Board Member, Hong Kong Institute of Social Impact Analysts (ISIA)
本地薑與港大研發被動式LED路燈 獲日內瓦國際發明獎 (16:54)
Prize and Recognition

- 2016 InnoTech Expo
  Our Hong Kong Foundation

- 2017 Science Exhibition
  Hong Kong Academy of Science
  ASTRI

- 2018 Geneva Invention Prize (Prize of Patent Office of Cooperation Council for the Arab States of the Gulf - GCCPO)
  46th International Exhibitions Geneva

- Special Gold Medal
「被動式LED電源」Passive Driver Technology

Newspaper Headlines – Glory of Hong Kong
Patent Pending – 77 Countries

Dear Mr. Wang,

I advise that the patent family related to PCT Application No. PCT/ CN2012/004893 for the invention titled “Driver for LED Lighting and Method of Driving LED Lighting” include the following patents and patent applications:

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As you can see from the table above, a total of 77 countries can be potentially covered by the patent family. This includes the regional patent applications of Europe and Eurasia which can potentially cover 44 and 6 countries respectively if all member, extension, and validation states are elected.

If you have any further queries, please do not hesitate to contact me.

Yours sincerely,

Owen Gee
Principal
Patent and Trade Mark Attorney
inCompass IP
## Media Coverage

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</table>

Electronic
CleanTech Projects

- Policy Change: Government Departmental Communication OGCIO, EPD, EMSD, HKO, Highway;

- Commercialization & Brand Building

- Spec in in Tender

- Funding sources

- Technical improvement & Collaboration with Universities

- Referral – Trial with Big Corporates
A Subsidiary of Synergy Group Holdings International Limited (1539.HK)

Stock No. 1539
Negawatt Team

Ir Dr. Daniel Chan, Co-Founder
RPE, CEng, FBSEOMS, FCIBSE, BEAM Professional
• 26 years Building Services Professor, HK Polytechnic University
• 10 years as engineering consultant
• Founder, Hong Kong BEAM
• SARS Fighter

Ir Dr. David Chan, Co-Founder
• PhD in AC System, Cardiff University
• 3+ years as engineering consultant (Arup)
• 3 years as facility manager (SHK)
• 2 years as sales engineer

Ir Dr. Xudong Yang, Principle Consultant
• Professor and Deputy Director of Building Science, Tsing Hua University
• PhD in Building Technology, MIT
• The 10th International Conference on Indoor Air Quality and Climate Organizing Committee

Arthur Lam, Executive Director
CAP, CEM
• Co Founder & Vice Chairman 1539.HK
• BS, Mechanical Engineering, Notre Dame University

Nicholas Ho, Smart City Advisor
HKIA, Registered Architect Registration Board (HK)
• APEC Business Advisory Council
• Convenor, HKTDC Belt and Road Committee Professional Services Working Group
• Member, HKTDC Belt and Road Committee

Dr. William Yu, Green Tech Advisor
PhD in Energy & Environment, University of Cambridge, UK
• CEO of World Green Organisation
• Deputy Chairman, Smart Living Award, HKICT Award
Negawatt Energy Management Solution

Artificial Intelligence (AI) assist top management to better understand how energy / resources are used & setup internal benchmarks

Internal Benchmark Establishment of different sites of corporate

Easy understood Energy Account Reporting

Alarming System to follow energy (finance) budget set up by top management & predictive maintenance

Alarming to Users via emails & other means
IoT with Big Data

- The Negawatt Big Data Analysis can achieve
  - Improvement of Energy Efficiency by 30 – 40% immediately in real application (Chiller Optimisation in Coefficient of Performance)
  - Reduce chance of abnormal operation (less peaks) to reduce chances of breakdown
- Other Advantage
  - Cater for Indoor Wellness to achieve no complaints from building occupants
  - Achieve Predictive Maintenance with data retrieved
  - Establishing Artificial Intelligence with data & analytic technique as foundation
ESCAP Second Regional Workshop:

Innovative climate finance mechanisms for financial institutions in the Asia-Pacific region

6 – 7 March, 2019

Bangkok
Barriers to Green Finance (I)

- Key economic and financial incentives and financial regulations used in the region to address barriers to green finance and the policy agenda for the region moving forward

- **Experience Sharing:** Advising Investment Bank on Cleantech Projects; Commercialization of Tech Start-ups in Smart City Solutions (Project level – Firm level); Facilitated Acquisition of Ai on Energy Saving Start-up by a publicly listed company

- **Phenomena:** Businesses – There is no funding; Funders: There is no pipelines; Too young for banks; Too small for venture capitalists

- **Technology risks:** Green technologies - higher up front capital costs

- **Operational or performance-related risks:** New technologies – challenges to integrate into existing infrastructure
Barriers to Green Finance (II)

- **Policy risks**: Threats of policy changes, for example, removal of subsidies
- **Regulatory risks**: Old regime of procurement system
- **Market risks**: Risks relating to the immaturity of the market
- **Strategic risks**: The new technologies are financially vulnerable during demonstration and deployment stages
- **Scale of Investment**: Uncertainty in credit-worthiness of local service provider
- **Gap in Capacity building**: Policy-maker’s risk-averse position in funding support
Barriers to Green Finance (III)

- **Private Finance:** Asset Managers do not take ESG integration into investment decisions

- **Clarity in ESG Disclosure:** Listed companies treat ESG reporting as a routine, box-ticking exercise
The European Commission: considering aligning corporate disclosure requirements with the (Task Force on Climate-related Financial Disclosure) TCFD recommendations, and to integrate ESG factors into investment and financial advisory services

Regulatory – China environmental disclosure guideline: A pilot group of Chinese and British financial institutions, piloting the TCFD recommendations
China-UK TCFD Pilot Group at http://greenfinanceinitiative.org/china-uk-tcfd-pilot-group/

Parliament’s Environmental Audit Committee: recommends UK Government sets a deadline for all listed companies to report on climate-related risks and opportunities, in line with the TCFD recommendations, on a comply or explain basis by 2022
Many other institutional investors, including asset owners, such as, insurance companies and retirement funds, have joined the Climate Action 100+ initiative [http://www.climateaction100.org/](http://www.climateaction100.org/).

Mercer report (2017) highlighted the potential variability of climate change on returns across 14 asset classes and 14 industry sectors over a 35-year period.

It concluded that median annual returns could vary from +3.5% (for renewables) to -4.9% (for coal) under different climate scenarios


Morgan Stanley’s Institute for Sustainable Investing report (2018) found that 84% of asset owners are pursuing or considering pursuing ESG integration in their investment practices

Enabling Environment & Policy (III)

- Article 173 of the French Energy Transition for Green Growth Act
- Certain asset management companies authorised by France’s financial markets regulator to disclose how they incorporate ESG factors, especially climate change considerations, into their investment and risk management processes on a “comply or explain” basis
- Labelling Schemes and Disclosure Requirements
- France issued criteria guidelines to be complied with by green funds seeking to be qualified for the “Energy and Ecological Transition for Climate Label
Recommendations (I)

Governmental Level

- **Government seeding fund**: Match funding from the private sector sources to sustain scale and spread risks

- **Quantifying Risks**: Improve knowledge in Climate-risks or technological-risks; clear risk definitions to avoid over-estimation

- **Build Accelerator Platform / Council**: Bring together Greentech or Cleantech Technical Experts and regulators to support Financial Experts to investigate different types of risks or opportunities

- **Green Bonds / Green Funds Rating**: Technical rating system developed for Green Bonds projects (not limited to financial rating)
Recommendations (II)

Governmental Level

- **Convergence of reporting standards**: Reporting direction and content remains fragmented. A clear reporting standards with clarity is needed (many metrics, parameters, standards, format)

- **Knowledge Sharing Platform**: Build platform to better communicate among scientific, insurance/reinsurance industry and strengthen the knowledge in climate scenario-risks

- **New Financial Product**: Work with Government to explore the feasibility of insurance products, such as, catastrophe bonds and build climate risk analytics across the countries

- **Set Climate Mitigation Measures**: Set Energy Saving Targets for city and business segments to facilitate the emergence of green industry, green technology and green funds
Recommendations (III)

Industry Level

**Supporting Policies:** To engage with the industry to formulate appropriate policies, codes and guidance for Climate Finance

**Alignment between Actors:** To align disclosure information from Banking sectors, Environmental governance bodies against information reported by corporations

**Credit-rating:** More credit-rating agencies started to factor ESG into their credit ratings as an indicator of risk

**Mandatory Disclosure:** Work towards mandatory requirements for all listed companies to do scenario-base environmental impact disclosure in corporate governance code

**Climate Analytics:** Private sector, academia and the Government should establish a Centre for Climate Analytics
Industry Level

- **Governance on Asset Manager:** Four major aspects of sustainable investing: 1. Commitment, 2. Investment process, 3. Post-investment ownership practices 4. Reporting of ESG performance

- **Asset Manager’s Disclosure:** To work towards obliging asset managers to disclose ESG, especially environmental factors, in the investment and risk analysis process

- **Asset Manager’s Duty:** Asset managers are required to check Client’s ESG preference in product recommendation

- **ESG Scoring System:** ESG and SDGs scores given to client’s investment portfolio
Recommendations (V)

Industry Level

- **Diversified Investment Portfolio**: The more predictable returns of the passive portfolio (investment manager to invest in more liquid instruments: bonds (fixed income) and listed equities) to fund less predictable impact investing projects.

- **Education**: UN, Financial Regulators, NGOs contribute to influence Asset owners, Corporate and Institutional investors, high net-worth individuals and family offices on investment directions.
Recommendations (VI)

Corporate Level

- **Targets Setting:** Nearly half of the Fortune 500 companies have set their renewable energy or carbon reduction target.

- **Comparability & Reliability of ESG Data:** Facilitate the knowledge of corporate in preparing ESG data and an international/local platform for comparison of reliable data among corporates under the consistent and fair reporting principles and framework.

- Develop new Green Tech Fund Platform for Good Projects endorsed by the UN.

- How to engage WGO’s business network (400 corporates/offices) to align with Climate Finance and SDGs?
Policy Advocacy & Lobbying (will announce in April)

- **Tendering System:** Removal the conditions of “years of operation” (10 years in market) to give way to start-up

- **Selection Criterion:** Change weighting portion of scoring from Price-oriented approach to: 70% in Technology weighting and 30% in Pricing to endorse the importance of new technology without reaching volume production

* Subject to final audit report
Thank You

www.thewgo.org

Dr. William Yu
Founder & CEO
World Green Organisation
williamyu@thewgo.org
Williamyu.tech@gmail.com
Public & Private Sources

PUBLIC SOURCES & INTERMEDIARIES

Development Finance Institutions

National

Multilateral

Bilateral

Governments & Agencies

Climate Funds

PRIVATE SOURCES & INTERMEDIARIES

Project Developers

Corporate Actors

Households

Commercial Financial Institutions

Private Equity, Venture Capital, Infrastructure Funds

Institutional Investors

Source: Climate Policy Initiatives
Founder & CEO

- Ph.D., University of Cambridge, U.K.
- Executive MBA, Thunderbird School of Global Management in Arizona State University, U.S.
- ESBN Task Force Member, United Nations The Economic and Social Commission for Asia and the Pacific (ESCAP) Business Advisory Council (EBAC)
- Member, Working Group, Sustainability Charter, Hong Kong and Malmo, Sweden, Environment Bureau, HKSAR Government
- Member, Sustainable Development Council, HKSAR Government
- Adjunct Professor, CB, City University of Hong Kong
- Honorary Corporate Adjunct Professor, MBA Program, Shanghai University
- Member, Energy Advisory Committee; Air Quality Objectives Review Working Group; Foodwise Campaign, HKSAR Government
- Deputy Chairman, Judging Panel, Hong Kong ICT Award
- Chairman, Judging Panel, BDO ESG Awards
- Advising Investment Banks, Accounting Firms & Listed Co on Green Project Investment and ESG Integration & reporting
- Advising Technology Start-ups
- Facilitates M&A, JV for Funders & Publicly Listed Company
World Green Organisation

World Green Organisation (WGO) is an independent non-governmental organisation concerned with environmental conservation and environmentally related livelihood and economic affairs.

It provides a holistic approach to a fully integrated three-pronged solution that combines social, environmental and economic dimensions for a paradigm shift towards low-carbon and climate-resilient development pathways.

Through science-based policy research and community projects, WGO aims to enhance the quality of the environment, promote a greener economy, and improve people’s livelihoods.