

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
03 July 2025 (03.07.2025)



(10) International Publication Number
WO 2025/144656 A1

(51) International Patent Classification:
F03B 13/14 (2006.01) *F03B 13/16* (2006.01)

(21) International Application Number:
PCT/US2024/060779

(22) International Filing Date:
18 December 2024 (18.12.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/615,259 27 December 2023 (27.12.2023) US

(71) Applicant: **THE TEXAS A&M UNIVERSITY SYSTEM** [US/US]; 175 Century Square, Suite 200, 3369 TAMU, College Station, Texas 77843-3369 (US).

(72) Inventors: **HENRY, Terry Wayne**; 3649 Old Mill Road, Greenville, Texas 75402 (US). **KESANAPALLI, Chai-**

tanya Chowdary; 515 1st St., Apt. 241, Galveston, Texas 77550 (US). **KANG, HeonYong**; 4247 Purdue St., Unit B, Houston, Texas 77005 (US).

(74) Agent: **BRAXDALE, Allan**; Norton Rose Fulbright US LLP, 2200 Ross Avenue, Suite 3600, Dallas, Texas 75201 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,

(54) Title: GLOBAL PERPETUAL ENERGY OCEAN BLANKET

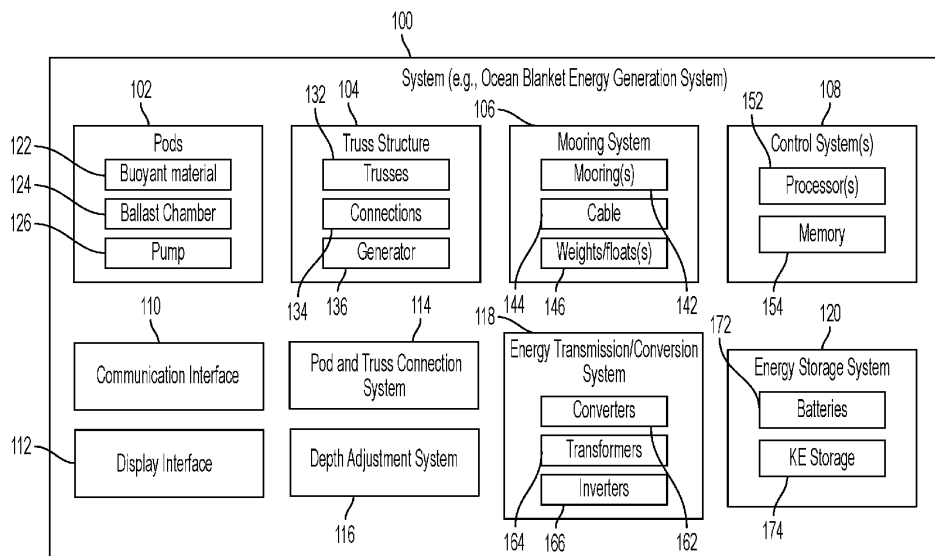


FIG. 1

(57) Abstract: This disclosure provides systems, methods, and devices for extracting energy from ocean waves. In a first aspect, an energy generation system includes a plurality of pods and a truss structure coupled to a pod array. The truss structure includes one or more trusses, where at least one truss of the one or more trusses includes a generator configured to generate energy. The pods include buoyant material and are configured to float and suspend the truss structure in water and move with incoming waves, and the pods are flexibly coupled to one another and configured to move relative to one another from incoming waves. Movement of the pods causes movement of the at least one truss of the one or more trusses and the generator thereof and generation of electricity. Other aspects and features are also claimed and described.

[Continued on next page]

WO 2025/144656 A1

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))