Durable Building Materials

BIOREFINING PROCESS SOURCE

Fiber composites manufacturing

DESCRIPTION

Wood waste streams can be repurposed into many durable building materials. Opportunities exist to replace a non-sustainable, valuable feedstock with a sustainable, low-value waste stream in nearly every subcategory of building materials. The examples listed below are not intended to be complete inventories of new products, but to indicate which markets might be receptive to innovative new products.

REPRESENTATIVE BIOBASED PRODUCT OPPORTUNITIES

MATERIAL TYPE	BIOBASED PRODUCTS	MARKET OPPORTUNITY	MARKET SIZE
Concrete & masonry	Concrete containing sawdust or paper mill residue	Lignocellulose waste streams can displace large amount of cement, which is very expensive and energy-intensive to manufacture.	Large
Wood & plastics	Fiberboard from wheat straw grass	Woodstalk fiberboard is lighter than medium-density fiberboard or fiberboard, and frees up those more valuable feedstocks for other purposes.	Large
Doors & windows	Door cores for hollow doors from paper mill residue	Using paper mill residue to manufacture mineral-bonded door cores saves virgin roundwood and may result in a product with superior fire resistance	Large
Finishes	Siding/underlayment from paper mill residue	Cementitious products containing paper mill residue reduce the amount of cement needed for manufacture while imparting desirable strength and density characteristics.	Large

REFERENCES

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